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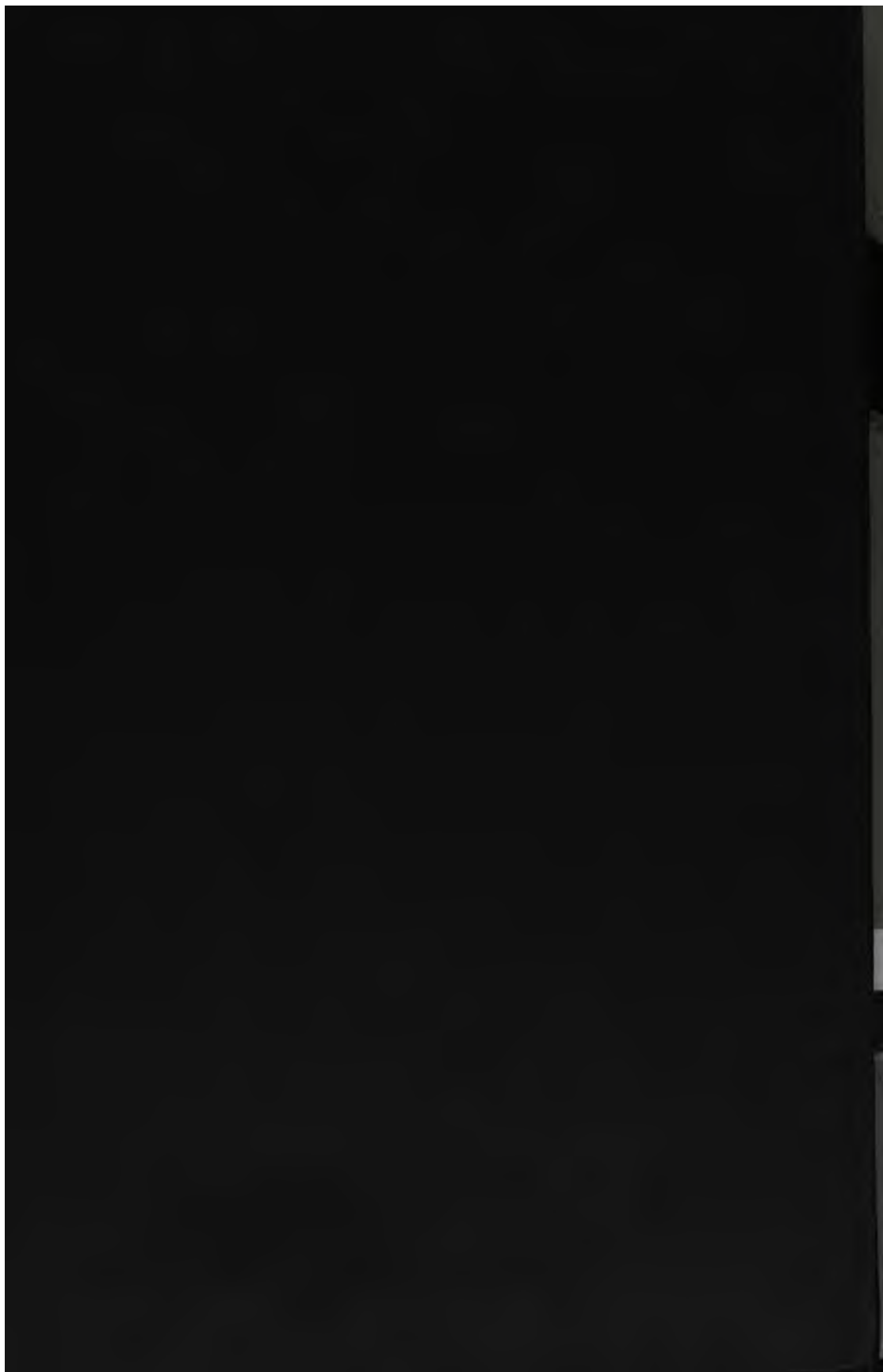
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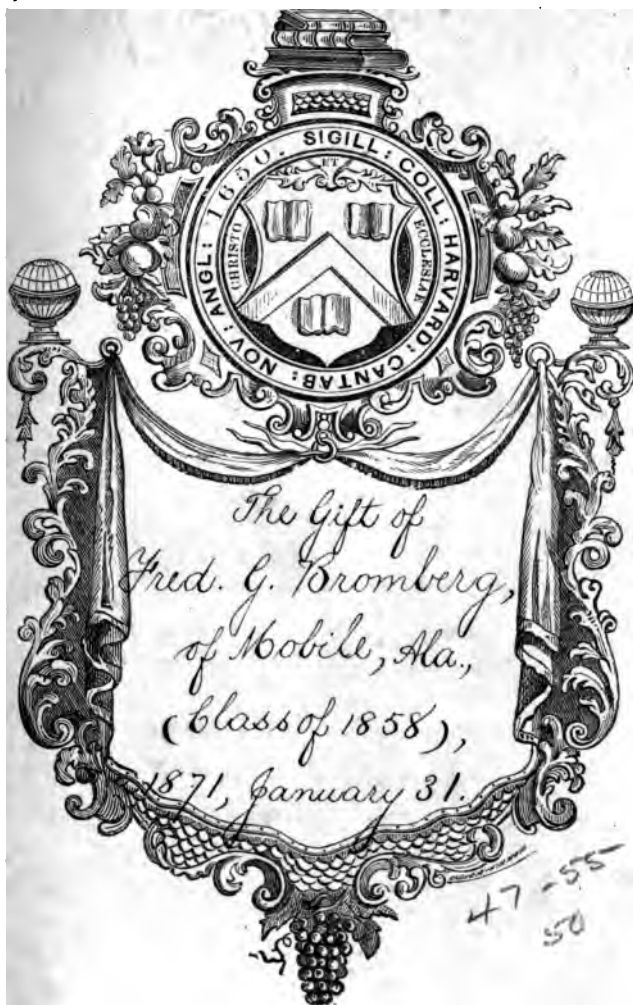
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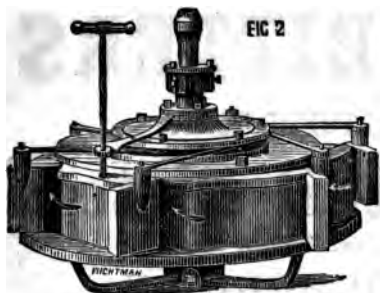
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Gentle—It affords me great pleasure to announce that your wheel gives satisfaction. I am satisfied that it will do all that you claim, and shall use my best recommendation for it in this section.

Yours truly,

Petersburg, Va., July 17, 1868.

JAS. O. RIDDLE.

Messrs. Stout, Mills & Temple, Dayton, Ohio:

Gentlemen—This will introduce to your acquaintance Mr. W. H. Sykes, one of the proprietors of the Crawson Cotton Mills, who comes to your place to examine and purchase one of your Water Wheels. . . . The 48-inch water wheel, I purchased of you 18 months ago, and since then driving my Cotton Mills, in place of my Overshot, formerly in use, works admirably. The longer it runs the better we like it.

Yours respectfully,

Lawrenceburg, Tenn., March 23, 1868.

J. & W. PARKES.

THE
ALABAMA MANUAL
AND
STATISTICAL REGISTER
FOR
1869.

SHOWING THE GEOGRAPHICAL POSITION, COMMERCIAL ADVANTAGES, AGRICULTURAL AND MANUFACTURAL RESOURCES, AND NATIONAL IMPORTANCE OF THE STATE OF ALABAMA—A STATISTICAL GUIDE FOR THE IMMIGRANT AND HAND BOOK FOR THE CITIZEN.

EDITED BY
JOSEPH HODGSON,
Editor of the Montgomery Daily Mail.

MONTGOMERY:
MAIL BUILDING.
1869.

~~12344-16~~

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1871. Jan. 31

Yours

Frederic George Bromberg,

Mobile Ala.

(H. U. 1558.)

Entered according to Act of Congress, in the year 1869, by
JOSEPH HODGSON,
In the Clerk's Office of the U. S. District Court, for Alabama.

ALABAMA

GENERAL DESCRIPTION OF ALABAMA

Sketch of her history—General description of her resources—Tabular statement comparing her with Pennsylvania, Massachusetts and Virginia—Her diversified productions—Capacity for cereals and iron—Her mineral wealth—Industrial divisions of the State—Area of territory, etc.

ALABAMA, an Indian name signifying "here we rest," was first known to the world from the adventures of De Soto. Marching from the coast of Florida, the cavalcade of that ill-fated Spaniard passed across what is now the State of Alabama. The chief of the great tribe of Coosas received him on the banks of that beautiful stream. Crossing the Tallapoosa and Coosa, the expedition moved toward the capital of the chief, Tuskaloosa, whose son had received De Soto in the present county of Montgomery. After daily struggles with the Mobilians and the Chickasaws, De Soto crossed the Tombigby, and moved on toward the Mississippi.

At the time of De Soto's march, Alabama was inhabited by the Coosas, Tallassees, Mobilians and Choctaws. These tribes having been almost ruined by his invasion, their places were filled by the Muscogees and Alabamas, who had been driven from Mexico by Cortéz, the former eventually swallowing up the latter and incorporating the tribes of the whole region in what was afterward known as the Creek Nation.

In 1702 the first white settlers invaded Alabama. Bienville, the father of Louisiana, sailed from Dauphin Island, seventeen years before the founding of New Orleans, passed up Mobile Bay, and established a fort and warehouse at the mouth of Dog River. Nine years later, the site of Mobile was fixed just above the mouth of Dog River, at its present location. Soon after the French invaded the Indian territory of Alabama from the west, the Virginia and Carolina traders commenced to invade it upon pack-horses from the east. To stop this English invasion, Bienville passed up the Alabama River to Coosawda, just above the present city of Montgomery, disembarked and built a fort at Tuskegee, calling it Fort Toulouse. For half a century the influx of English whites continued, notwithstanding the constant disputes and

often bloody contests which ensued between the respective adherents of the Indian, the Spanish, the French and the English interest.

By the treaty of Paris in 1763, Alabama passed into the possession of the English, and was embraced in the territory of West Florida and of Illinois. The line dividing the two territories passed between Montgomery and Wetumpka, leaving the point now occupied by the former in West Florida, and the latter in Illinois. The former portion only was at that time occupied by the whites. The first English government was organized under George Johnson who garrisoned the forts at Mobile and Tuskegee.

At the treaty of peace with Great Britain the State of Georgia came into possession of all that portion of West Florida which lay north of the 31st parallel, and the United States having acquired the rights of Georgia, proceeded to erect the territory of Mississippi, with Winthrop Sargent as Governor. From this date the history of Alabama is the history of all the incipient States which grew up in the midst of an Indian population, although perhaps the Creek War, set on foot at the instigation of Tecumseh, in 1813, and suppressed by General Jackson, was more trying to the endurance of the white settlers than those which occurred elsewhere. After the defeat of the British at New Orleans, Alabama rapidly recovered from the shock of the Indian war, and began her career of progress.

A stream of emigration soon overspread the State, after her admission into the Union in 1819, from Virginia, the Carolinas, Tennessee, Kentucky and Georgia. After the fall of Napoleon, even French refugees came and settled the town of Demopolis, in the county of Marengo, to engage in the cultivation of the olive.

The State of Alabama lies opening on its southern boundary with a spacious bay to the Gulf of Mexico; into which flow all of her rivers, with one exception, whose navigable waters drain a fertile country for 1945 miles. From Tuscaloosa on the Warrior, in the direction of Selma on the Alabama, are bituminous coal fields and iron ore, with marble and hard and soft limestone quarries, in rich and inexhaustible profusion. The lands are covered with splendid forests of white and live oak, cypress, pine, cedar, mulberry, hickory, etc. Water power is unlimited and never-failing.

The lands of Alabama are of amazing superiority, as may be seen from the value of her productions even under the system of slavery; which tended to strengthen a single branch of industry at the expense of all the rest. Now that slavery is gone, and that the value of the cotton fields is greater than even before 1860, and now that we see

diversified labor springing up to absorb and increase the capital which formerly went from the cotton-planter into slaves, it is easy to calculate the greater ratio at which this beautiful state will increase in the future from the ratio at which she increased in the past. The actual value of the raw cotton produced by Alabama is an unquestionable basis for calculations as to her future growth in population and wealth.

In 1846-7 the cotton crop of Alabama amounted to 409,962 bales; in 1847-8 to 503,161; in 1848-9 to 596,000; in 1859-60 to 997,978; in 1867-8 to 366,193; in 1868-9 to 400,000 (estimated).

The value of the crop of 1846-7 was \$24,570,972. That of 1847-8 was \$17,321,317. That of 1848-9 was \$17,956,200. That of 1868-9 is estimated at \$50,000,000.

The amount of money which the cotton crop of Alabama has added to the wealth of the State may be estimated from the fact that up to 1860 she had expended in the purchase of slaves not less than \$200,000,000. This amount of money spent in half a century upon works of public improvement and in factories would have doubled the present population and wealth of those Northern states which have been free from slave labor. What another system of labor would have done for Alabama is now a mere matter of speculation, but it is no matter of speculation to see that the cotton planters of Alabama in 1868-9 have made more money than they made in any year before the war, and that the surplus, above actual expenses, must hereafter find some other investment than slaves.

The cotton fields, being the basis of the wealth of the State, present the greatest inducements to the agriculturist. Probably not half of the available cotton lands are under cultivation. They can be bought at most reasonable prices. To industry and enterprise they offer a surety of fortune.

But the cultivation of cotton is not the only source of wealth presented to the citizen of Alabama. It is *the* extraordinary source which will at all times strengthen and expand the other sources; but, although it is the corner-stone, Alabama presents a hundred other resources to rear the superstructure. Her minerals, her water power for factories, her mild climate for constant labor, her splendid fruits, her natural advantages for a railroad and water-line system, her diversified farm products, her vineyards, her diversity of soil and climate, all present advantages, which, taken in connection with her cotton fields, place her in the front rank of American States. Throughout the entire length of her territory from the Tennessee river to the Gulf, we find everywhere the elements which constitute a great State, whether it be in the splendid wheat and corn valleys of the spurs of the Cumberland and on the

banks of the Tennessee, or among the hills which are bursting with precious ores, or among the fruits which grow in rank luxuriance on the hill-sides of north and middle Alabama, or in the cotton fields of the cretaceous and limestone belts, or further south among the figs and olives, or among the magnificent pine forests south of the prairies; or still further south, where the live oaks and the orange groves look out upon the swelling commerce of the Gulf.

Alabama was admitted as a State in 1819, with a population of 127,901. In 1830 her population was 809,527; in 1840, 590,753; in 1850, 771,623; in 1855, 841,704; and in 1860, 964,296.

Owing to the fertility of her soil and her favorable climate, she soon became pre-eminently an agricultural state, standing in this respect in the front rank. By the census of 1850, she possessed 41,964 farms, having 4,435,614 acres in cultivation, and producing annually 225,771,000 lbs. of cotton, 28,754,048 bushels of corn, 294,064 bushels of wheat, 2,965,697 bushels of oats, 892,701 bushels of beans and peas, 5,475,204 bushels of sweet potatoes, 261,482 bushels of Irish potatoes, 4,008,811 lbs. of butter, 2,311,252 lbs. of rice, and 164,990 lbs. of tobacco. The live stock was valued at \$21,690,122.

In 1860 her population had increased since the last census at the rate of nearly twenty-five per cent., being a larger ratio of increase than is exhibited by the States of Kentucky and Massachusetts, almost as large as that of New York and Pennsylvania, twice as great as that of Virginia, and one-third greater than that of Georgia. Within the same period the number of acres of cultivated lands had increased to 6,462,987. Her number of bales of cotton had increased from 564,429 to 997,978. Her bushels of corn had increased to 32,761,194, her bushels of wheat to 1,222,487, and other productions in like proportion.

The following tabular statement from the census of 1860 exhibits the progress of Alabama as compared with that of the most celebrated of Southern States, and two of the most flourishing of the Northern States:

	ALABAMA.	MASSACHUSETTS.	PENNSYLVANIA.	VIRGINIA.
Population.....	964,201	1,231,066	2,906,115	1,596,318
Ratio of increase since 1850..	24.96	23.79	25.71	12.29
Mortality for 1860.....	12,760	21,304	30,214	22,474
Iron Founding.....	\$142,480	1,801,035	4,977,793	809,955
Coal.....	\$1,200	.....	2,833,859	690,188
Lumber.....	\$2,017,641	2,288,419	11,311,149	2,537,130
Increase since 1850.....	82.8	47.4	46.3	159.5
Flour and Meal.....	807,502	4,196,710	26,572,261	15,212,060
Whisky	13,044	1,266,570	2,183,421	391,143
Cotton Goods.....	917,105	36,745,864	11,759,000	1,063,611

	ALABAMA.	MASSACHUSETTS.	PENNSYLVANIA.	VIRGINIA.
Woolen Goods.....	218,000	18,930,000	12,744,373	809,760
Real Estate.....	155,034,089	475,413,165	561,192,980	417,952,228
Personal Property.....	277,164,673	301,744,651	158,060,355	239,069,108
Ratio of increase since 1850..	117.01	71.93	96.05	84.17
Acres of improved lands.....	6,462,987	2,155,512	10,463,306	11,435,954
Value of Farms.....	\$172,176,168	123,255,948	662,050,707	371,696,211
Horses.....	127,205	47,786	437,654	287,522
Sheep.....	369,061	114,829	1,631,540	1,042,946
Swine.....	1,736,959	73,948	1,031,266	1,589,519
Value of Live Stock.....	43,061,805	12,737,744	69,672,726	47,794,256
Bushels of Wheat.....	1,222,487	119,783	13,045,231	13,129,180
Bushels of Corn.....	32,761,194	2,157,063	28,196,821	38,360,704
Bushels of Sweet Potatoes...	5,420,987	616	103,190	1,960,808
Value of Orchard Products...	213,323	252,196	1,479,938	800,650
Value of slaughtered animals	10,325,022	2,915,045	13,399,378	11,488,441
Daily Newspapers.....	9	17	28	15
Weekly Newspapers.....	73	78	242	85
Miles of Railroad.....	743.16	1,272.96	2,542.49	1,771.16
Cost.....	\$17,591,188	58,882,328	143,471,710	64,958,807
Bales of Cotton.....	997,978	.....	.....	12,727

By an analysis of this table it will be discovered that in point of health the State of Alabama stands ahead of Virginia and Massachusetts, and on an equal footing with Pennsylvania; that, in production of corn, she stands, considering her population, superior to all three; that, in number of newspapers, she stands ahead of Massachusetts and Virginia, and on a par with Pennsylvania; and that, whereas the productions of Massachusetts in cotton and woolen goods amounted to \$55,675,864, of Pennsylvania to \$24,503,378, and of Virginia to \$1,873,371, the productions of Alabama in raw cotton amounted to \$50,000,000.

When it is remembered that the figures presented by this table were made at a time when slavery existed, and when the production of cotton was made paramount to all other agricultural, and indeed to commercial and manufacturing pursuits, and when the demand for newspapers was restricted to half the population, it will be seen at a glance that the relative position of Alabama, in comparison with the two Northern States, is still further strengthened.

Alabama embraces a wonderful variety of soil and climate, and is diversified with mountains, plains, hills, and valleys. She abounds in mineral springs. The Blount Springs, furnishing both sulphur and chalybeate waters, gushing from the silurian rocks in a high and healthy region, are destined to become a great watering place of the South. She grows all the grains and esculents and fruits of the Northern States—some in great perfection, and some which the higher lati-

tudes can not produce at all. The ordinary staples have not been grown so abundantly, because cotton has paid so much better than corn, wheat, rye, and oats. Yet these articles could be produced for exportation if the interest of the country demanded it. She produces every garden vegetable in the greatest perfection. The peach, the apricot, the cantelope, the water-melon, the strawberry, the field-pea, and the sweet potato attain a sweetness, a perfection, and a size not found in the Northern States. The sweet potato, especially, yields enormously, and keeps from one year's end to another. She grows oranges and figs, rice and the Cuban sugar cane; one acre yielding from thirty to eighty bushels of rice, and one acre of cane yielding about two barrels of sugar and three barrels of molasses. Hogs, cattle, sheep, horses, mules, and poultry, are also successfully raised. As good bacon is cured in Alabama as can be made anywhere in the United States. Here the farmer can supply his table with every comfort, except coffee, and from his own labor. With industry and good management he need patronize the grocer only for coffee. His cotton crop brings him gold, which is all clear gain, and enables him to lay up money for a rainy day. On account of the character of the soil, a man can cultivate twice as many acres of land in Alabama as he can in Ohio, and with one-third of the expense of the blacksmith for shoeing animals and sharpening plantation utensils. Clothing is much cheaper, because the people can wear cotton much longer than in higher latitudes. And a greater difference in favor of Alabama is that, owing to the mildness of her winters, the laborer is not compelled to toil unceasingly through Summer and Fall to get fuel and make hay to keep his family warm and his stock from starving, as he has to do through the dreary months of Northern latitudes.

One of the great requisites of a State is a capacity to furnish its own iron for making agricultural implements. This capacity the State of Alabama possesses in a pre-eminent degree, as will be more fully exhibited in subsequent pages. The geological survey of Professor Toumey, undertaken several years ago by order of the Legislature of Alabama, has disclosed a wealth in iron and coal of this State that is only surpassed, if at all, by Pennsylvania. Sir Charles Lyell (the best authority), who visited Alabama in 1846, says that "the Warrior coal-field is ninety miles long, from northeast to southwest, with a breadth of from ten to thirty miles. The Cahaba is nearly of equal length and breadth."

This, however, does not tell half the story, as the geological reports and subsequent explorations during the war have disclosed. Sir Charles

reports nothing of the coal fields of the Coosa, and yet these are nearly as extensive as the other coal measures mentioned by him. We will not at this time enter more fully into the question of the coal and iron interest of this State, except to show the general proposition that the presence of these indispensable minerals in such immense quantities opens up a great future for Alabama. While there are hundreds of beds of iron ores of different varieties existing all over the State, the most wonderful is the Red Mountain, stratified with red hematite ore, varying in thickness from fifteen feet to fifty feet, and extending a distance of ninety miles, underlaid with limestone that crops out above the surface, to flux the ore; with the Warrior coal-field on one side and the Cahaba coal-field on the other, both near to and parallel to it, to melt the ore.

Colonel Thomas C. Johnson, who was for many years a lawyer of St. Louis, and a State Senator from that city, and thoroughly acquainted with the iron resources of Missouri, declared that before visiting Alabama he had been in the habit of regarding the Iron Mountain of Missouri as the richest mass of iron ore in the world. But upon inspection of the mineral resources of Alabama he was compelled to admit that her advantages in respect to iron are greater than those of Missouri. Colonel Johnson, after the close of the war, was elected President of Randolph-Macon College, in Virginia, which office he held until his lamentable death by accident in 1868. His opinion is entitled to the greatest weight. We give his language:

"I have lived in Missouri, and have been in the habit of regarding the Iron Mountain of that State as the richest mass of iron ore on the face of the earth, and doubtless it is. But the great drawback on that locality is, that there is no coal within profitable reach. Wood charcoal has to be used, which is too expensive now. This, however, may be remedied when the Iron Mountain Railroad is extended to a point within convenient distance of the coal. But nature, as if intending Alabama to be the great Central Southern State, has so arranged the iron ores, coal measures, and limestone strata, as to throw them together.

"And when you add to this, that the red hematite is the easiest of all ores to work, and that Alabama abounds with immense water-power, upon almost every creek and river, that never freezes nor runs dry, you can form some idea of her immense wealth and resources."

Besides the capacity to produce the cereals and to furnish cheap iron, Alabama possesses all the other attributes which we ascribe to a great State. She abounds in forests of the finest timber of all kinds, and particularly in pine, which enters so much into the commerce of both city

and country. Her clays make excellent brick, and building-stone is found in nearly every county. Immense beds of marl are distributed, which will be the means of keeping her lands rich and continuously productive. To this, it may be added that she has valuable gold mines that have already been profitably worked; that quarries of marble have already been opened, which in grain, texture, and whiteness, rival the marbles from the far-famed quarries of Carrara, in Italy. Besides these, she possesses manganese, slates, fire-brick clays, mill-stone rock, furnace-hearth rock, and other valuable minerals and rocks, known to exist in great abundance.

The variety of productions of Alabama, is due to her admirable topography. The Allegheny Mountains exhaust themselves in the north-eastern portion of the State, rendering that region uneven and broken, although the elevation is nowhere great. It is in the continuation of this range that we find cropping out the wonderful mineral beds which follow the Alleghenies from Pennsylvania, through Virginia and Tennessee, down to the heart of Alabama. This range extends west, with a slight bend to the south, and forms the dividing line between the waters of the Tennessee, which are turned from their natural course northward, and the other waters of the State, which flow southward into the gulf. From this elevated range, in the valleys of which we find the most delightful climate, and health-giving waters, the country slopes to the south, and is somewhat uneven as far as the center of the State, where the hills disappear in a belt of prairies, which lie smooth and luxuriant with cotton for a distance of from sixty to one hundred miles in width, and stretching across the State from east to west. South of this cotton belt the pine forests and the fertile alluvial river bottoms extend to the Gulf. It will be seen at a glance that such an admirable topography concentrates within the limits of the State the productions of nearly every degree of latitude. Descending from the base of the Alleghenies we reach, successively, fruits and cereals such as enrich the Western States; minerals, such as adorn the Middle States; a splendid cotton region which furnishes nearly eighteen per cent. of the cotton of the United States; and then the magnolias of an almost tropical sky, and the oranges which perfume the delightful breezes of the Gulf. Alabama alone, of the States of the Union, is capable of manufacturing every article needed for husbandry, and at the same time producing every article necessary for the sustenance and comfort of man.

The area of Alabama is 50,722 square miles, divided, in an industrial point of view, into five great divisions, of each of which we will treat in turn, after alluding to the questions of health and climate:

	SQUARE MILES.
1. The timber region, containing.....	11,000
2. The cotton region, containing.....	11,500
3. The manufacturing region, containing.....	8,700
4. The mineral region, containing.....	15,200
5. The stock and agricultural region, containing.....	4,322
Total area.....	50,722

CLIMATE AND HEALTH OF ALABAMA.

Mobile—Its situation and surroundings—Health, compared with other cities—Greater health of other parts of the State—U. S. mortuary report—Comparison with other States—Testimony of Dr. J. C. Nott, etc.

MOBILE is situated on the west bank of Mobile River, just where it empties into Mobile Bay. The site is but little elevated above the level of the river, but sufficiently so for all purposes of drainage. The soil is dry and sandy. Immediately above the city, on the north, is a large swamp, extending along the banks of the river. Back of the city, on the northwest, west and south, the dry, sandy pine hills commence, affording delightful and healthy retreats from the heat, sickness, and annoyances of the city during the summer months, and at such infrequent times as yellow-fever may be brought through the quarantine. Yellow-fever never originates at Mobile, or at any other point in Alabama. During the war the entire Gulf coast was free from that disease, and not a single case is known to have occurred in Mobile. The blockade was an effective protection, and no reason exists why a quarantine could not be established, and be made as effective hereafter, as was the blockade during the war; yet, if by accident, the yellow-fever should be brought to Mobile, the neighboring pine hills, upon which have sprung up the villages of Spring Hill, Cottage Hill, Summerville, and Fulton, afford a safe retreat.

Mobile once had the reputation of being exceedingly unhealthy, but since the epidemic of 1843, we venture to say that its sanitary reports will compare favorably with those of any city of the Union.

The fact that, since 1843, no serious epidemics have visited Mobile, is no doubt due to the fact, that marshes which occupied the northern part of the city have been filled in, and that a better system of drainage has been established.

As an illustration of the healthiness of Mobile, the following table is

given. It shows the number of each class—whites and blacks—males and females—who have died in Mobile, from 1845 to 1850, inclusive :

	1845.	1846.	1847.	1848.	1849.	1850.	TOTAL.
Males.....	279	324	396	536	580	396	2,511
Females.....	163	159	212	267	329	220	1,350
Whites.....	320	339	443	566	637	433	2,728
Blacks.....	122	144	175	239	273	173	1,131
Total.....	442	483	618	805	910	606	3,859

Within that decade which embraced the two years, 1848 and 1849, in which the cholera and its kindred affections swelled the mortality somewhat, we find that the average mortality was 611 per annum. By comparing this average with that of other cities, we find that in Mobile the percentage of deaths is less than in Philadelphia or New York, and very little more than in London or Paris, where longevity has been reduced to a science. Thus the average annual mortality in 1850, of

London, population.....	2,000,000	was	44,700
Paris "	1,000,000	"	23,500
New York "	440,000	"	23,400
Philadelphia "	400,000	"	14,000
New Orleans "	125,000	"	7,954
Mobile "	20,000	"	611

These figures would give a mortality for

London, of.....	1	in every 44 living.
Paris.....	1	42 "
New York.....	1	19 "
Philadelphia.....	1	27 "
New Orleans.....	1	15 "
Mobile.....	1	32 "

In examining the above table, we are struck with the greater mortality of males over females. The reasons for this may be found in the hitherto careless habits and often useless exposure of the male population. Not only is the health of Mobile shown to be greater than that of other coast cities of the United States, but the fact is also established that the health of the Alabama Gulf coast would be still better if the male population would avoid useless exposure at certain seasons.

If this is true of Mobile, and no one can question it, what remains to be said of the interior prairie and mountainous sections of the State? Simply, that the health of Alabama can compare favorably with that of any of the most populous States of the North.

The following table is copied from the United States census of 1860. The percentage column exhibits the number of deaths in every 100

persons; the last column shows the number, in each State, out of which one person has died:

	POPULATION.	DEATHS.	PERCENTAGE.	ONE FOR EVERY
Alabama.....	964,201	12,760	1.32	75
Arkansas.....	435,450	8,860	2.03	49
California.....	379,994	3,705	.97	102
Connecticut.....	460,147	6,138	1.33	74
Delaware.....	112,216	1,346	1.11	90
Florida.....	144,425	1,769	1.25	79
Georgia.....	1,057,286	12,807	1.21	82
Illinois.....	1,711,951	19,263	1.12	88
Iowa.....	674,913	7,260	1.07	93
Indiana.....	1,350,438	15,205	1.12	88
Kansas.....	107,306	1,443	1.34	74
Kentucky.....	1,155,684	16,467	1.44	70
Louisiana.....	708,002	12,329	1.74	57
Maine.....	628,379	7,614	1.21	82
Maryland.....	687,049	7,370	1.07	93
Massachusetts.....	1,231,063	21,304	1.73	57
Michigan.....	749,118	7,399	.98	01
Minnesota.....	172,123	1,109	.64	155
Mississippi.....	791,305	12,214	1.54	64
Missouri.....	1,182,012	17,557	1.48	67
New Hampshire.....	326,073	4,469	1.37	72
New Jersey.....	672,035	7,525	1.11	89
New York.....	3,880,735	46,881	1.20	82
North Carolina.....	992,622	12,607	1.27	78
Ohio.....	2,339,511	24,724	1.05	94
Oregon.....	52,465	251	.47	209
Pennsylvania.....	2,906,115	30,214	1.03	96
Rhode Island.....	174,620	2,479	1.41	70
South Carolina.....	703,708	9,745	1.38	72
Tennessee.....	1,109,801	15,176	1.36	73
Texas.....	604,215	9,369	1.55	64
Vermont.....	315,098	3,355	1.06	93
Virginia.....	1,596,318	22,474	1.40	71
Wisconsin.....	775,831	7,129	.92	108
District of Columbia.....	75,080	1,275	1.69	58
Nebraska.....	28,841	381	1.32	75
New Mexico.....	93,516	1,305	1.39	71
Utah.....	40,273	374	.92	107

It will be observed from this table that the percentage of mortality is less in Alabama than in the States of Arkansas, Connecticut, Kansas, Kentucky, Louisiana, Massachusetts, Mississippi, Missouri, New Hampshire, Rhode Island, South Carolina, Tennessee, Texas, Virginia and Nebraska, and differs almost imperceptibly from that of any of the

other States, except those remarkably salubrious States at the headwaters of the Mississippi, where the air is always dry and as clear as crystal.

By referring again to the census of 1860, the idea that Alabama is afflicted with fevers throughout her prairie belt, is dissipated by a comparison with other States, and it will be seen that exposure to the heat of the summers of Alabama is less fatal than exposure to the cold of the winters of the North. In 1860 the deaths from the following diseases, in the following States, is thus stated by the census :

	FEVERS.	CONSUMPTION.	TOTAL.
Alabama.....	1,462	596	2,058
Tennessee.....	1,745	1,440	3,185
Massachusetts.....	975	4,845	5,820
Kentucky.....	1,669	1,742	3,311
Missouri.....	2,363	1,302	3,665

This comparison proves that the State of Alabama does not suffer as much from fevers, in proportion to her population, as Tennessee, Kentucky and Missouri, and that the advantage which the Northern and Eastern States may possess during the three months of summer are more than counterbalanced by the diseases incident to colder climates. The deaths from consumption in 1860 were—in New York, 8,207; in Ohio, 3,495; in Pennsylvania, 5,011; in Virginia, 2,109; in Indiana, 1,704; in Illinois, 1,948. By comparing this fatality with that of Alabama, it will be seen that consumption is far more fatal at the North than fevers are at the South. Thus nature draws off the balance-sheet of mortality, and by her unbending law of compensation always finds a debit for a credit.

That distinguished physician, Dr. J. C. Nott, who has passed a life of eminent usefulness at Mobile, and whose evidence is unquestionable, does not hesitate to express his opinion that the climate and health of even the worst portions of Alabama are equal to those of the Northern States. He says :

“ We have said that the pine hills are healthy, and that the whites can and do live there with health. We have on the other hand said, that the white man can not cultivate the rice fields, and a considerable portion of the *alluvial* cotton lands. *But on the other hand there is an immense proportion of our cotton lands, on which white laborers can and will live with a reasonable degree of health—perhaps (when we take into consideration the many diseases incident to dense populations) with as much health as in most parts of Europe from which our emigrants come.*

“ A very large portion of our cotton lands are to a great degree

exempt from malarial diseases, and making an average of the whole year, and thus including diseases of cold as well as heat, it may be well doubted whether these portions are not as favorable to health and longevity as either our New England or Western States. For example, the lime or prairie lands of Mississippi and Alabama, and the uplands generally of the Carolinas, Georgia, and other cotton States—even the fertile lands on the banks of the Mississippi, when thoroughly drained and cultivated, may be considered as quite healthy, and if a good system of drainage and culture was generally adopted, the proportion of land unsuited to white labor would be small.

“Laying aside all speculation on the subject, there are facts in abundance to prove that whites can live, labor and make cotton in our climate, and the bait is too tempting to be resisted. At fifty cents a pound, one industrious laborer can make his food and clothing, and put besides, yearly, a thousand dollars of good money in his pocket, and the white man will do it at a much greater risk of life or health than he is called upon to make in well selected cotton fields of the South.

“Even now, every-where through the Carolinas, Georgia and the Gulf States, you see little farms worked successfully by white laborers, both male and female. We should, too, have seen a great deal more of this kind of labor had it not been for the proximity of slave labor. Not only have these small farmers been driven off by the monopoly of the rich, in buying up their little farms to get them out of the way, but agricultural labor has scarcely been considered honorable at the South. The poor white man was put on a footing with the slave that he despised.

“Another proof of the availability of white labor is seen around our towns—nearly all the market gardens around Mobile and New Orleans (and so with other towns) are cultivated by white laborers, although these localities are among the most insalubrious in the South. The towns themselves are healthy to the acclimated, but the marshy suburbs are very sickly.

“Who, let us ask, have built our Southern towns? Is it not almost exclusively Northern and foreign carpenters and bricklayers, who labor in the full blaze of a Southern sun?

“Although Germans, Irish and Northerners, can and will live and prosper in the Southern States, there is no doubt that emigrants from France, Spain and Italy would be most readily and perfectly adapted to our climate.”

It may be said, that in no part of the State are the extremes of heat and cold felt, with rare exceptions, and then for no great length of time.

During the summer the mercury ranges from 104° to 60°F. In November and the winter months, from 82° to 18°, and in Spring 92° to 22°. The mean temperature of the State is about 68°, or perhaps something less, and the mercury seldom rises above 93°.

TIMBER REGION OF ALABAMA.

Description by Lewis Troost, Esq.—Capacity for fruit culture—Susceptibility of fertilization—The Dickson plan—Peculiar value of the oaks—New process of tanning—Value for turpentine and resin—Cost of a Turpentine Orchard—Estimate of the yield—Value of the hard pine—The saw-mill interest, etc.

IN an interesting article contributed to DeBow's *Review*, LEWIS TROOST, Esq., of Mobile, a distinguished civil engineer of that city, thus describes the most southern region of Alabama:

"The timber region is the most southern division of the State, bordering on the Gulf of Mexico and the State of Florida. It extends eastwardly and westwardly across the State, and northwardly 132 miles from the Gulf of Mexico, and 40 miles from the State of Florida.

"This section, except where occupied by the immediate valleys of rivers, is covered with forests of long-leaf yellow pine (*pinus australis*), affording excellent timber (of matchless size) for domestic, public, and naval purposes, and yielding also tar, pitch, and turpentine.

"The low lands of the rivers have growths of white, black, and Spanish oak, and bald and black cypress. The latter furnishes a timber, stated by the old Spanish settlers to last many years, even in the most exposed situations.

"The surface of the country is gently undulating, the highest elevations being about three hundred feet above mean low tide. The soil, consisting of sand and clay, and sandy loam based on clay, is poor, but when of the latter character, it is well adapted for the cultivation of grapes, peaches, apples, and pears. When manured, it is productive of cotton and corn, and preserves its fertility.

"In this section stock rearing is profitable, and is attended with little trouble; the piney woods, bordering on the streams, affording natural perennial pastures; and the climate being mild, housing the cattle is not required. The only expense incurred in this pursuit is to herd and export the cattle to market.

"The waters of the Gulf of Mexico and the Bay of Mobile supply fish and oysters of excellent quality, in great abundance.

"This division of the State is traversed from north to south by the navigable rivers Alabama and Tombigby, flowing into the Bay of Mobile, and by the Mobile and Ohio and Mobile and Great Northern Railroads, the first extending in a north by west direction from the city of Mobile, and connecting with the railroads of the Southwestern, Western, Northwestern and Northern States, and the second running in a north by east direction from Mobile, and forming a junction with the system of railroads of the Southeastern, Eastern, Northeastern and Northern States.

"The health of this section of country is good. It has been, since its first settlement, the summer resort of the cities, and of the planters cultivating the rich alluvial lands on the rivers. In late years, having been rendered accessible by railroads, it has become better settled, and is every day increasing in value, not only for summer residences, but for fruit-raising, and for manufacturing lumber and naval stores.

"Good locations for orchards, farms, and gardens, convenient to market by the railroads, may be procured at from \$1.50 to \$4 per acre, depending on their proximity to the railroads."

Heretofore but little attention has been paid to this timbered region, except to obtain lumber and turpentine; but of late a new interest has attached to the pine lands, in consequence of the railroads opening up a market for fruits, with the Northwest, and also in consequence of the capacity of such of the land as possesses a clay foundation to be highly improved by a free use of manure, and rendered largely productive of cotton. The land can be bought for a mere song. The timber upon it will more than pay for an ample supply of fertilizers, and the vegetables and fruits, which are developed early, and which yield abundantly, can be shipped to the markets of Louisville, Cincinnati and Chicago, by railway, and anticipate the Northern supply by six weeks or two months.

Pine lands in Georgia, similar to those of Alabama, are now, strange to say, producing cotton in equal luxuriance with those of the prairies. A correspondent of the *Southern Cultivator* gives a description of a twenty-acre pine lot planted in cotton in 1868, by Mr. David Dickson, of Hancock County, Georgia, and the wonderful yield it gave:

"The land is tolerably level, and for pine land is pretty stiff, with good substratum of clay; has been in cultivation for 60 or 70 years, and for the last two years planted in cotton. Mr. Dickson commenced its preparation at 10 o'clock on the morning of May 4th, by running a scooter furrow in the middles, and following in the same furrow with a

long shovel, both going as deep as possible, and making a furrow about 8 inches deep.

"The manure was proportioned as follows: Guano, 160 lbs.; dissolved bones, 240 lbs.; salt, 100 lbs.; land plaster, 160 lbs.—thoroughly mixed, and cost, on the place, \$16 (sixteen dollars.) This quantity was applied to each acre, by being deposited in the bottom of the 8-inch furrow, and covered with a long scooter, running as deep as possible on each side—this furrow was sided with a good turn plow, followed by a good scooter, running in the bottom of the same furrow.

"The old cotton stalks were then plowed up with a long shovel. This completed the preparation. The cotton planting was commenced May 7th, and finished May 10th.

"Until May 20th, the weather was excessively wet; May 29th, light rain; June 20th, light rain; July 29th to August 4th, showery—sufficient to make one good rain; August 29th, heavy rain, with more or less rain every day for a week.

"Seven sweep furrows and one good hoeing completed the cultivation. The seed were of the David Dickson (of Oxford) variety, and have been twice selected by Mr. Dickson. The worms have eaten off the foliage and young bolls, but notwithstanding the injury by drought, and the ravages of the worms, the yield is fully from one to two bales per acre—the best portion being where there was most vegetable mould.

"This description, Messrs. Editors, with but few changes, will apply to Mr. Dickson's entire crop. Some fields are not manured quite so highly (Cuffee is very much opposed to manures), but they are all prepared and cultivated alike, and in proportion to manure used, with the same wonderful success. The very general impression that Mr. Dickson's princely domains are level sand bends, is very erroneous. He has every variety of soil, from clay to sand, and his surface is exceedingly broken, and in many places very rocky. Yet his system of preparation and cultivation is applied alike to all, with the same marvelous success. Failure is a word he ignores entirely, provided he can get Cuffee to half follow his directions.

"Mr. Dickson's corn crop is very fine, but he has so many cribs full of corn, made two or three years ago, that he does not seem to be half as much interested in looking at a fine field of corn, as he does at a dense and heavy growth of weeds on his fields lying out at rest. To the skeptic it is only necessary to pay a flying visit to Mr. Dickson's princely domains, enjoy his princely hospitality, see the evidence of his wonderful success, and be convinced that he is really a Prince among planters."

All of this, it will be observed, is the result of using fertilizers, and of scientific farming. Broken, sandy pine lands, which have been worked seventy years, are made capable of producing, in a bad season, from one to two bales of cotton to the acre.

We venture to predict that in the course of another decade, a large proportion of the pine lands which possess clay foundation, will, in point of productiveness, be not far behind the cotton region, while they will be much preferable to the latter in point of health. In alluding to the timbered region of Alabama, we must not fail to remember the new part which will soon be played by the magnificent forests of oak which grow upon the low lands of our rivers. The new enterprise of converting the astringent or tanning properties of crude oak bark into an imperishable extract, in the forest where the bark is peeled, and transporting that to market in place of the crude bark, is an enterprise that promises to the people of Alabama a most important source of revenue. This oak extract sells in New York, Philadelphia, and Boston, at prices ranging from ten to twelve and a half cents per pound, and responsible parties in each of those markets are ready to contract for all they can get at eight cents per pound. One cord of prime oak bark will yield forty-five gallons of extract, which will weigh four hundred and fifty pounds, or ten pounds to the gallon; and at this price, eight cents, it will—after paying the cost of the bark, say three dollars per cord, cost of manufacture, transportation from Alabama to New York, commissions for selling, cost of barrels, insurance, storage, etc.—return to the manufacturer a net profit of twenty-five dollars per cord. The most approved machinery used in the manufacture of this extract will produce two barrels of extract from two cords of bark per hour, or forty-eight barrels every twenty-four hours. A factory of this capacity, complete in all its appointments, will cost from seven to nine thousand dollars, the difference being in the cost of lumber at the place of construction. Mr. John B. Hoyt, for a number of years a citizen of Alabama, writes from New York to the *Mobile Register* that this calculation is strictly correct, and the reasons which he gives for thus estimating the value of our oak forests, in this connection, are very clear. He says:

“It must be remembered that Pennsylvania, New Jersey, New York, and the six New England States, produce five-sixths of all the leather manufactured in the United States, and that in these States no oak suitable for tanning purposes is grown, with the exception of Pennsylvania, and but limited quantities are found there. Oak bark in its crude form, in Southern forests, has, in consequence of distance, been prohibitory to Northern tanners, but the discovery of converting its tanning proper-

ties into an imperishable extract, has opened to the leather trade of the Northern States, and to those of all Europe, access to the great forests of oak on both slopes of the Cumberland Mountains, along their entire range from the Alleghenies to the Gulf.

"Leather dealers with whom I conferred, generally concede that oak extract must take the place of hemlock bark, or hemlock extract, in the manufacture of leather in the vicinity of Boston, New York and Philadelphia; and in Europe, the place of the East India extracts, which are principally used, as oak is preferred by all tanners."

The pine lands of Alabama are also of great value for turpentine and resin. Immense "orchards" are laid off in the virgin forest of pines, and large fortunes have been made from small capital in conducting this profitable business. The orchard is already planted to hand by nature. The process of cutting the boxes is simple. When that labor is done, and the ground protected from accidents of fire, the boxes are filled by the process of nature and the further labor is confined to the distillation. An idea of the profits derived from this business may be gained from the following approximate estimate of the cost and yield of an orchard of 100,000 boxes:

Cost of still etc.....	3,000
Wages of manager, or foreman, at \$100 per month.....	1,200
Wages of ten boxers and hackers at \$40 per month.....	4,800
Wages of cooper, from April to October, at \$60 per month.....	420
Wages of distiller, from April to October.....	420
Wages of teamster, from April to October, at \$40 per month.....	280
Wages of four hands to dip, during seven months.....	1,200
Cost of barrels for resin and spirits.....	1,000
Wagon and mule team.....	300
Two horses, saddles, etc.....	300
Contingent expenses.....	2,000
Total necessary expenditure.....	<u>\$17,340</u>

The yield of such an orchard during the first year, when properly cultivated, should be about 2,500 barrels of "virgin dip" gum, yielding on distillation about 1,700 barrels of white resin and 17,000 gallons of spirits of turpentine. Estimating resin at \$10 per barrel, and the spirits at 50 cents per gallon, we have a gross production the first year of about \$25,000, with a clear profit in money of \$8,000 besides the land, the orchard and the still. The orchard will last ten years, and the still almost as long.

During the second year, or after the orchard has been fully opened

and has been worked, the necessary capital is much diminished, being reduced to what will pay the monthly wages of the *employees* until the distillation commences in the spring. After which time the products can always find an immediate sale, and should amply suffice to furnish to the place all funds required for carrying on the work.

But the great present wealth of this region of the State consists in its splendid lumber. Since the war, notwithstanding the depression of business, large numbers of saw-mills have been erected upon Mobile Bay and its tributaries, many of them by Northern men.

Where the best pine logs can be furnished at \$5 per 1000 feet, and choice cargoes of lumber can be loaded at the mills, on vessels drawing between ten and eleven feet of water, for shipment direct to distant or to foreign ports, at the low rate of \$12 per 1,000 feet, it is evident there must exist the best possible facilities for the lumber business—facilities and advantages possessed by no other region on the Gulf or the Atlantic coast—and which can not long escape the attention of capitalists and business men. Three-fourths of the pine lumber now shipped to New Orleans comes from the region between Mobile Bay and Pascagoula Bay.

It is well known that the best lumber regions of the North are fast being deprived of their forests. The lumber supply from Maine is in rapid process of exhaustion. New York has to get much of her lumber from remote regions of Canada. Michigan, Upper Wisconsin, and Minnesota can not long sustain the drain upon them for the enormous demands for lumber in the Great West. The rapidity with which the lumber supplies of the North are being exhausted, is indicated by the high price of lumber in the Northern markets, increasing, moreover, from year to year. Chicago sold, in 1867, about 750,000,000 feet of lumber. In one day last year 238 vessels arrived at Chicago from the lake ports, loaded with lumber. Not only whole regions, but even large towns and cities in the Northern States and in Canada owe their importance entirely to the lumber interest.

Now, here on the Alabama coast, is an inexhaustible supply of lumber, enough to fill all demands for a century to come, not only of hard pine lumber, but also of cypress, oak of various kinds, ash, gum, hickory, poplar, juniper, cherry, walnut, and some cedar. Moreover, the hard pine lumber is at least a hundred per cent. more valuable for many uses than the soft pine and spruce of the Northern forests. Spars have for twenty years been shipped from this region to England, France and Spain. A single piece, ninety-two feet long and a foot square at the

upper end, is said to have been the finest spar ever shipped from this country.

These enormous tracts of "Piney Woods," which can now be bought for a trifle, will soon be sought for as a profitable investment. There are admirable localities for at least a hundred saw-mills upon the tributaries of the bays and estuaries of Alabama, where vessels could load directly for New York, Baltimore, Havana, Texas, Mexico, South America or Europe.

COTTON REGION OF ALABAMA.

Description of extent and soil—Increasing demand for cotton goods—A durable commodity—Equal to a bill of exchange—Profits of cultivating—Estimate of Solon Robinson—White labor—Negro labor, etc.

THE cotton-growing section of Alabama lies next north of the timber region. It occupies a belt extending eastwardly and westwardly across the State, with widths of 102 miles, north and south, on the western line of the State; of 60 miles in the middle of the State, south of the Alabama river, between Selma and Montgomery; and of 60 miles, north and south, on the eastern edge of the State.

This belt of land, as regards soil and climate, is admirably adapted to the cultivation of cotton and provisions, and is the most healthy, rich, agricultural country in the Southern States.

It is interspersed with immense prairies. The soil is stiff, black, and, so to speak, inexhaustibly rich; from two to twenty feet thick, resting on a bed of rotten limestone.

Perhaps there is not to be found a country possessing greater advantages for raising cotton, corn and provisions for the planter, combined with health for the laborer, white or black, than this famous cotton region of Alabama.

Thirty years ago much of this section was in little request, on account of the difficulty of procuring water, and from the belief that it was unsuitable for making cotton. Since then, water has been obtained in abundance, and of good quality, by excavating cisterns in the soft, underlying limestone, and by forming artesian wells by boring through the impermeable limestone to the permeable beds of sand and gravel resting underneath, at a depth of from 200 to 1,000 feet; and the soil generally, being formed of the decomposition of rotten limestone and organic matter, proved to be of extraordinary fertility. Hence this section has

become, since that period, well settled by intelligent planters, who, before the war, as a class, were not excelled in wealth.

Such was the capacity of this country for raising cotton and provisions, that, with its acknowledged health, it became much sought for by planters. Prior to the war, plantations here commanded from \$30 to \$50 per acre. Now, rich cultivated plantations, convenient to rivers and railroads, may be obtained for from \$5 to \$10 per acre. With good cultivation, the land will make from 50 to 60 bushels of corn, or 800 to 900 lbs. of seed cotton per acre. The larger portion of it also will produce clover and all the grass families.

The Alabama river and the Tombigby, with its affluents, the Warrior and Little Tombigby rivers, all navigable for steamboats for portions of the year, run through this section from north to south.

The Mobile & Ohio Railroad skirts its western boundary; the Montgomery and West Point Railroad passes along its northeastern boundary; the Alabama & Florida Railroad runs nearly north and south through its middle section; its northeastern corner is traversed by the Mobile & Girard Railroad, and the Selma & Meridian Railroad passes through its northwestern part, connecting the Alabama river with the Tombigby river and the Mobile and Ohio Railroad. Thus by means of rivers and railroads, easy access to market is afforded.

The assertion is ventured that there is not under the sun a more favorable spot in every respect, for the planter and farmer, than the cotton growing belt of Alabama. The soil is very productive, and, with proper cultivation, inexhaustible; the climate is genial; and health of the country for both white and black is good, without doubt, and a market is accessible by the rivers and railroads.

The capacity of Alabama for the growth of cotton is evidenced by the fact that, with one exception, she leads the other cotton-producing States, and in 1860, before her labor was interrupted, gave 997,978 bales to the entire number, 5,196,944, which were produced in that year. Although a temporary demoralization of labor, and unfortunate seasons, together with the unusually severe visits of worms, have reduced the yield of cotton to less than one-half of the number of bales produced before the war, still, the great advance in prices makes the lesser crop almost, if not equally, as profitable as were the greater crops before the war.

It is universally conceded that the Cotton States of America have a soil and climate to produce the long staple cotton, possessed by no other country under the sun. It is from American cotton that all the fine cotton fabrics are made. India and China grow cotton, but it is the

short staple that can not be worked without the staple of the Southern States to mix with it.

Should the yield of those countries reach ten millions of bales per annum, it would only increase the demand for American cotton to mix with it. The world has been so long educated to the use of cotton goods, and so much money has been invested in machinery to manufacture cotton fabrics, that the raw material will be raised in the Cotton States by one kind of labor or another. Cotton is now selling for twice as much in gold as it brought before the war. In 1860, it netted from eight to ten cents in gold. In Montgomery, during the month of November, 1868, it netted twenty cents in gold. With a few exceptions, all other agricultural products, both North and South, can be bought with the gold, at a little advance on prices in 1860. We may therefore safely say that the raising of cotton, to the hand, pays twice as much as the raising of any other agricultural product, North or South. Nor is it likely that any thing will occur to change this state of things. The best informed men believe, that the present high prices of cotton will be maintained for at least ten years to come.

The demand by foreign countries for all other of our agricultural products depends upon the contingency of good and bad crops in those countries. If their crops are bad, there is a demand for our grains. If the seasons are propitious, there is no demand. But the prices of cotton do not depend upon the good and bad seasons of other countries. The demand for it is steady, both in this country and foreign countries; and while other crops may be sold for trash, this always brings gold. This steadiness of demand is the greatest stimulant of production, and makes cotton-planting a certainty. A bad grain crop in Europe produces high prices for grain here, and farmers make fair profits. But a good grain crop there leaves no demand here, and farmers have no profits, and very often sustain heavy losses. This steadiness of demand not only stimulates production, but makes the raising of cotton the only safe agricultural business carried on by hired labor, which is hereafter to be the order of the day.

No other product will keep from year to year for better prices like cotton. The grains are attacked by weevil, flour becomes musty, meats become tainted, and other esculents speedily decay; but cotton will remain for years the same. The cotton sold in 1865, had been held over for four or five years, and there is no difference in the prices between that raised in 1859 and 1860 and that raised in 1864. While in many cases the wrappers have rotted so as to require new baling, the cotton itself is as good as new. On cotton, money can be borrowed on

long or short time, and a bale of cotton is a bill of exchange on New York or London, as the holder may desire.

The profits of cultivating cotton are undoubtedly greater than that of cultivating any other production which has as yet entered certainly upon the field of agriculture. It is almost impossible to estimate accurately or even approximately the probable expenses of a plantation at this time, so great have been the changes in the cost of food, and so irregular the application of labor. But, the regularity which is now being resumed upon the plantations, and the rigid economy which the planter is learning to practice, justifies us in predicting that the profits of cotton planting may be hereafter calculated from statistics which ruled before the war. We have before us the statistics of a cotton estate of 4,200 acres (2,700 in cultivation), employing before the war 254 slaves (old and young) and 60 mules and mares, which yielded 831,000 lbs. of cotton and a large amount of other products. Of the 254 slaves, not more than 180 could have been working hands (an unusual proportion), which would give to each hand fifteen acres for cultivation.

The profits of this plantation as compiled from actual figures, by Mr. Solon Robinson, late Agricultural Editor of the *New York Tribune*, in 1848-9, may be condensed as follows :

CAPITAL INVESTED, \$150,152.

INCOME OF THE FARM.

331,136 lbs. cotton, at 7 cts.....	\$23,179 52
Bacon and other products sold.....	2,430 00
Increase of negroes, say 5 per cent. (value \$89,000)......	4,495 00
	<u>\$30,104 52</u>
Annual expenses, as itemized by Mr. R., a full estimate, including freight and commission.....	\$ 6,791 48
Net income.....	<u>\$23,313 04</u>

or about fifteen and one-half per cent. In the estimate of expenses, \$2,090.54 are included for clothing, etc., which would not apply to the present system of labor.

Assuming this estate to be equally well managed now, estimating the incidental outlays at four times former cost, and adding the wages of 180 field hands, deducting the loss of the slaves from the capital invested, and leaving the other values unchanged, the increase in cost of stock, etc., being more than made up by the depreciation in the price of land, and the result should be as follows :

CAPITAL INVESTED, \$60,252.

INCOME OF THE FARM.

331,136 lbs. cotton, at 25 cts.....	\$82,784 00
Surplus minor products sold (at twice the value in 1849)	4,860 00
	<hr/>
	\$87,644 00

EXPENSES.

Wages of 180 field hands at \$150 per annum.....	\$27,000 00
Incidental expenses, at four times cost in 1849.....	18,805 60
	<hr/>
	\$45,805 60
Leaving.....	<hr/>
	\$41,839 40

as the net income, if the labor could be relied upon to do *only* as well as it did under the old system. With 180 white field hands, such an estate as we are now considering could produce clean cotton at fifteen cents gold per pound, and leave a margin of profit which few industries now yield. The experiment has been made in various localities, and has uniformly proved successful. The German colony in Texas is a case in point, and in several cases reported of small estates, worked last season exclusively by white labor, of both foreign and native origin, the results have been most promising.

There is no reason why cotton can not be grown by white labor. The idea that the white man can not stand the cotton field of Alabama as safely as he can the corn-fields of Illinois, has been exploded since the war. The Northern armies, composed largely of men from the extreme Northern States, and from every nation of the old world, settled on our coast, and penetrated and held the most malarious regions of the South during the late war, and, numbers considered, did not suffer any more than the Confederate armies opposed to them. The truth is, that men's habits have more to do with their health than the climate. Thousands of men have destroyed their health by intemperance in eating and drinking, and then laid it to the climate. Temperate men in the South attain to the average of life of temperate men in higher latitudes; and whether a man goes North or South, he must go through a process of acclimation.

But Alabama can safely depend for the future success of her cotton fields upon the free negroes, who must for some years form the basis of our agricultural labor. The negroes must starve or work. Being largely outnumbered by the whites in Alabama, and dependent upon them, as the owners of the soil, for employment, they must be governed hereafter by the rules which apply elsewhere between capitalist and laborer. The negro must not only work, but he must work hard if he would gain a livelihood. His new relations to the State impose upon him the sup-

port of his own wife and children, and his aged father and mother, and he can not get away. This is his native country; he is a fixture to its soil. The whites, with far more means, could not get away, if they desired. And it is not to be supposed that a population without means can do any better than to work.

During the year 1868 the blacks labored faithfully upon the plantations, and, considering the terrible reverses, from bad seasons and worms, did as well as they ever did before the war. The planter who treats his *employees* with kindness and pays them their wages, can get as many hands as he desires, and be served as faithfully as it is possible for the negro to labor.

PROFITS OF COTTON-PLANTING IN ALABAMA.

Estimate of the American Land Company—Six estimates of the profits of planting cotton—Estimate by a Northern man in Louisiana—Another by an old Alabama planter—Another by an old Mississippi planter—Another estimate for the Uplands of Alabama—Another for the higher latitude of Tennessee, etc.

THE American Land Company, of New York, published in 1866 an extended list of plantations for sale, and attached to it the following considerations and statistics, which it would be well for our readers everywhere to consult, making due allowances for changes in prices since:

“One hand can cultivate from eight to ten acres of cotton, and half as many more in corn.

“One mule will be required on an average to every two laborers. Two plows of all kinds to three mules.

“Upland produces about half a bale of cotton; best bottom-land a bale and upward to the acre.

“A bale of ginned cotton averages 500 pounds.

“Cotton, as picked from the field, contains three pounds cotton-seed to one pound ginned cotton.

“One man will raise from eight to fifteen bales of cotton on bottom-land, from four to seven bales on upland, and, with either, 100 to 300 bushels of corn.

“The plowing for cotton should be commenced in January. The

seed should be planted in March. By the 15th of July the planter can tell, almost for a certainty, his year's crop. The picking begins in August, and new cotton can be in the market by October.

" Upland plantations, which were assessed for taxes at from \$25 to \$50 per acre before the war, with all the buildings and machinery complete, can now be purchased at from \$5 to \$8 per acre.

" Bottom-land plantations, which were assessed for taxes at from \$50 to \$120 per acre before the war, with all the buildings and machinery complete, can now be purchased at from \$10 to \$30 per acre.

" It requires about \$4,000 to grow 100 acres of cotton, \$1,000 of which can be got from the crop itself.

Cotton plantations contain on an average from 900 to 2,500 acres—some as small as 400, others as large as 5,000 acres.

" The best cotton lands of the South are within six days from Boston. They are not as far from New England, and are not by any means as difficult of access as the lands in Kansas were; and the danger, even to those who magnify it most, is not half what it was to the settler there. Yet the danger deterred no one from going there. We had a principle to settle, and we settled it right, and it remains forever. Who will help settle, by New England energy, enterprise and economy, the question of free labor upon the cotton fields of the South? It will give almost fabulous returns, pecuniarily, for the investment; it will help the poor freedmen; it will help the society at the South; it will help the country at large.

" If you wish correct, wholesome and progressive ideas established on the ruins of the now prostrate slave-system of the South, do not sit idly theorizing, moralizing and doubting, *but take hold and work*, and that speedily. Show to the South your faith in free labor, by furnishing it employment. The laborer starves and dies, or becomes a public charge and an outcast, for want of the employment your capital can give.

" The following estimate No. 1, was made by a Northern man who is now a cotton planter in Louisiana, and is based on the high prices of the last two years. These expenses are twenty per cent. above the present rates.

" The estimate No. 2 is made by a planter of twenty years' experience in Alabama and Arkansas; a close calculation, with expenses at a minimum.

" The estimates Nos. 3 and 4 were made by a cotton planter of sixteen years' experience in planting in Mississippi; a fair calculation, and will be verified by experiment.

"The estimate No. 5 is made by a Georgia planter, for the uplands of Georgia, Alabama and North Carolina, &c.; a reliable estimate, and not too favorable.

"The estimate No. 6 is made by a man acquainted with planting more particularly in Tennessee and Virginia," &c.:

ESTIMATE NO. 1.

Estimated cost and profit of a cotton plantation of 1,000 acres open land, and for five years, respectively:

<i>Cost of Farming 1,000 Acres Cotton, First Year.</i>		<i>Minimum.</i>	<i>Maximum.</i>
Hire and support of 100 laborers, from \$15 to \$25 per month, \$180 to \$300 per year.....			
		\$18,000	\$30,000
Cost of 40 mules, at \$100 to \$150.....			
		4,000	6,000
Cost of farming implements, carts, harness, etc.....			
		1,500	2,000
Rent of land, \$3 to \$5.....			
		3,000	5,000
Planter's services.....			
		2,000	3,000
Overseer's services.....			
		1,000	1,500
2,000 bushels corn, 50 cents to \$1.....			
		1,000	2,000
Deduct what can be used from growing crop, viz. :			
Half of hire lands.....			
		\$9,000	\$15,000
" rent of land.....			
		3,000	5,000
" planter's services.....			
		2,000	3,000
" overseer's services.....			
		500	750
		<hr/>	<hr/>
		\$14,500	\$23,750
From \$15,000 to \$25,000 for first year's capital. The crop begins to yield returns in August.			
Total cost first year.....			
		\$30,500 to 49,500	
Deduct.....			
		14,500 to 23,750	
		<hr/>	
Total capital required to be advanced for first year.....			
		\$16,000 to 25,750	
• <i>Cost of Farming any Year after the First.</i>			
Cost first year.....			
		\$30,500 to 49,500	
Deduct cost of mules.....			
		\$4,000 to 6,000	
" " corn.....			
		1,000 to 2,000	
" " for support of hands; corn and pork raised; say one-quarter hire and support.....			
		4,500 to 7,500—9,500 to 15,500	
		<hr/>	
Total cost any year after first.....			
		21,000	34,000
Cost first year.....			
		30,500	49,500
Cost four subsequent years.....			
		84,000	136,000
		<hr/>	<hr/>
		114,500	185,500

Proceeds of 1,000 Acres for Five Years.

From 500 to 1,000 bushels of corn per annum; from 2,500 to 5,000 bushels for five years; from 1,000,000 to 2,000,000 lbs. cotton for five years, say from 10 cents to 30 cents per lb.

Gross Proceeds with Cotton.

At 10 cents per lb.....	\$100,000 to \$200,000
At 30 cents per lb.....	300,000 to 600,000
Without considering increase of stock.	

ESTIMATE NO. II.

Cost of farming a plantation of 1,200 acres Mississippi bottom-lands, 1,000 open land, for first year:

<i>Expenses.</i>		<i>Profits.</i>	
80 hands, average of \$70 each...	\$5,600	700 bales cotton, 400 lbs. per	
45 mules, cost \$125 each.	5,625	bale, 50 cents per lb.....	\$140,000
1 overseer, and board.....	1,000	5,000 bushels of corn raised.....	3,000
5,000 bushels corn.....	3,000	Pork raised.....	3,000
Hay.....	1,000	Wagons, carts.....	1,000
Cotton seed for planting.....	1,000	Cows, &c.....	1,000
4 yokes of oxen.....	1,000	Oxen.....	1,000
Milch cows.....	1,000	45 mules.....	5,000
Stock hogs.....	1,000	Fodder, hay, &c.....	1,500
Plows, carts, implements.....	2,500	Implements, &c.....	500
Salt for stock.....	200		
Medical care of hands.....	400	Total.....	\$156,000
Oats, rye.....	200	Deduct expenses.....	25,425
Axes, hoes, iron, steel, &c.....	500		
Molasses.....	200	Profits.....	\$128,875
Incidental.....	1,200	Deduct cost of land, at \$20 per	
		acre, 1,200 acres.....	24,000
Total.....	\$25,425		
			\$104,875

The land at the end of the year will advance 100 per cent.; all the supplies will be on the plantation for the next year, from the products of the first year.

ESTIMATE NO. III.

Estimate of the expense and profit in cultivating 650 acres of Mississippi or Yazoo Valley Land—say 500 acres in cotton and 150 acres in corn, for first year:

Expenses.

To hire 50 hands, at \$120 per annum	\$6,000
To 50 bbls. mess pork, at \$35 per bbl.....	1,750
To 12 bbls. molasses, at \$40 per bbl.....	500
To clothing for 50 hands, at \$40 to \$50 each.....	2,500
To medicines and medical attention.....	750
To 25 mules, at \$125 each.....	3,125
To 2,500 bushels of corn, at \$1 per bushel.....	2,500
To fodder and hay.....	1,000
To wagons, plows, hoes, gearing, &c.....	2,000
To wages of superintendent, &c.....	1,000
To oxen, milch cows, &c.....	1,000
To stock hogs, to raise bacon for next year.....	750
To incidental expenses.....	2,125
Total expenses.....	\$25,000

Profits.

By 500 bales of cotton, of 400 lbs. each, at 30 cents per lb.....	\$60,000
By 5,000 bushels of corn, at 75 cents per bushel.....	3,750
By fodder and hay.....	1,500
	<u>\$62,250</u>
Deduct expenses.....	25,000
Leaving for net profit	<u>\$40,250</u>

Such a plantation can be purchased for from \$10,000 to \$15,000; good buildings, etc. The land will double its value in the purchaser's hands, in addition to the profits of the crop.

A plantation in the Mississippi Valley that would have 650 acres of open land, would probably contain 1,500 in the entire tract; and estimating this at \$20 per acre, would make \$30,000, which, deducted from \$40,250, the net amount of profit would leave \$10,250 as clear profit, besides having paid for 1,500 acres of lands, and the mules, cattle, hogs, wagons, farming implements, etc.

ESTIMATE NO. IV.

If a first-class upland or creek-bottom plantation is cultivated, then, in 1,500 acres of land, 1,000 acres would probably be open land; and cultivating 700 acres of this in cotton and 300 acres in corn, the expenses of cultivation would not exceed, say \$27,000. The product would be at least:

350 bales of cotton, of 400 lbs. each, at 30 cents.....	\$42,000
6,000 bushels of corn, at 75 cents.....	4,500
Fodder and hay.....	2,500
	<u>\$49,000</u>
Deduct expenses.....	27,000
Leaving a clear profit of.....	<u>\$22,000</u>
Deduct the cost of 1,500 acres of first-class upland.....	15,000
Leaving for net profit.....	<u>\$7,000</u>

This leaves a clear profit of \$7,000, besides paying for 1,500 acres of first-class upland or creek-bottom land, and all the mules, cattle, hogs, and plantation tools and implements.

In the valley plantations generally, only about one-third the lands are opened for cultivation, and in the upland and creek-bottom plantations, about two-thirds; the remainder of the lands, in both cases, being wood and pasture lands, which can be reduced to cultivation, from year to year, as required.

In the Mississippi and Yazoo Valley, about ten acres, and in the upland and creek-bottom lands about twelve and a half to fourteen acres.

per hand, are cultivated in cotton. The average production of the valley lands is about 400 lbs. of cotton per acre, and, in the first-class upland and creek-bottom lands, about 200 to 300 lbs. per acre.

ESTIMATE NO. V.

Estimate Cost of Raising Upland Cotton.—Planting 100 acres in cotton, and the same quantity in corn; employing ten good hands.

Expenses.

120 bushels corn, \$90; bacon, \$273.....	\$363
5 mules, \$90; provender, \$360.....	810
5 plows, \$40; 2 carts, \$60; 1 wagon, \$100.....	200
Hoes, and other utensils.....	100
10 laborers, \$120.....	1,200
Total.....	\$2,673

Products.

300 lbs. cotton to the acre, 30,000 lbs. at 40 cents.....	\$12,000
30 bushels corn to the acre, 3,000 bushels, at 75 cents.....	2,250
	<u>\$14,250</u>

Leaving net profit.....\$11,577

Remember there is nothing difficult or scientific in the raising of cotton; the least skilled labor in the world, under the most unskillful direction and management, has made the fortunes of those engaged in it. Our New England farmers can learn it without an effort in a single season, or can manage a plantation with the aid of an experienced overseer, at once. Men laboring for a bare living here, can, at the South, with the present prices of land, amass a fortune in two years.

ESTIMATE NO. VI.

Estimate on a Farm of 40 Acres.—10 acres in cotton, 15 acres in corn, potatoes, fruit, etc., 15 acres in wood-land, for fires, fences, etc., by his own labor only.

The land will cost from \$5 to \$20 per acre, according to locality and improvements. Corn at 75 cents per bushel; bacon at 15 cents per pound.

Expenses per Year.

Food for himself, corn, 12 bushels, \$9; bacon, or equivalent, 200 lbs., \$30..	\$ 39 00
Mule, \$100; provender, \$60.....	160 00
Cost of cart, \$40; plows, \$12.....	52 00
Hoes, etc.....	10 00
	<u>\$ 261 00</u>

Products.

Clean cotton, 3,000 lbs.....	\$1,200 00
Corn, 300 bushels.....	225 00
Fodder, 2,500 lbs.....	18 75
	<u>\$1,443 75</u>

Products.

Deduct.....	\$ 261 00
Net profits	\$1,182 75
Add value of mule, etc.....	120 00
	<hr/> \$1,302 75

It may be said, generally, that an industrious man can, on a farm of the above description, support himself, family and stock well, and raise from six to ten bales of cotton clear of all expense. The estimate of 300 lbs. cotton per acre is quite moderate, as 400 lbs., and more, are often raised.

REMARKABLE PRODUCTIONS OF ALABAMA.

Other agricultural products—The Okra plant—Its use in the manufacture of paper—Cost of cultivation—The Ramie plant—Its history—Remarkable fibre—Three crops each year—Mode of culture—Value, etc.

APART from cotton-planting, which is made a specialty in the richer portions of the State, there are other branches of agriculture which are not overlooked, and which are made productive of wealth. We do not call special attention to the corn which grows in every section of the State, and justifies the planter in making enough to meet the wants of his plantation; nor to the wheat which grows luxuriantly in the valleys of middle and north Alabama; nor to the early fruits with which every portion of the State abounds, and which anticipate the Northern market by several weeks; nor to the castor-plant which grows almost spontaneously, and offers to the oil traders a handsome return for cultivation; nor to the hundred other productions which grow alike in all sections of the country. We allude now to but two products to which the attention of the people is directed with special interest for the first time—the OKRA and the RAMIE plant. The Okra plant has heretofore entered simply into the economy of the garden. It now promises to enter into the economy of the plantation.

Experiments have been made at the Chickasabogue Paper Manufactory, near Mobile, which resulted in the demonstration of the fact that a very superior article of paper can be made from the Okra plant. These experiments were conducted with great care, and every step taken was scrutinized very closely by men skilled in the work of paper manufacture, and not favorably inclined to the proposed innovation. The demonstration, however, was so complete as to remove all doubt

from the minds of the most incredulous of lookers-on, and the fact that a superior article of paper can be made from the Okra stalk may be regarded as established.

It is also considered certain that the Okra can be bleached to any required degree of whiteness; that the cost of reducing it to "half stuff" and pulp will not, on a considerable scale, be greater than the cost of converting rags into pulp. The paper itself is as strong as that made from pure linen—thus combining in one material a great desideratum in paper making—flexibility and strength. The paper made of cotton rags requires an admixture of hemp or other material of strong fibre to give it the requisite strength, but the Okra may be used as "hard stock"—to give strength to any other material—or by itself alone. It will work well in combination, in any desired proportion, with any other stock, or it may be made to alternate with rags, as the circumstances or exigencies of a mill may at any time demand. The great value of this property in the Okra will be apparent to any one at all acquainted with the business of paper manufacture.

The Mobile *Tribune*, criticising the experiments made by the Chickasabogue Mills, says that the point left to demonstrate is the cost of Okra stalks in comparison with that of other paper stock. This, of course, can not be fully determined without further experiment. The *Tribune* takes it for granted, however, that Okra can be grown on a large scale very cheaply, and that it can be made to pay a handsome profit to the producer and yet be sold to the manufacturer at a price so low as to enable him to reduce the cost of the manufactured article to consumers, and "take the market" even from the manufacturers of straw and wood papers. The Okra plant is indigenous to the South, and with a soil moderately fertile will grow luxuriantly. It requires little skill to cultivate it. The fruit is a valuable and increasingly popular article of diet, and if produced in too large quantities for the table, it will be found an excellent article of food for cattle and hogs. The seed is valuable, and will at all times command a ready sale at good prices. It is estimated that the seed product will be ample to pay the entire expense of cultivating the plant.

In our genial climate the farmer has the option of a continuous growth until frost, or growing two crops in one season on the same land. Although of the same family as cotton, it is free from the attacks of the multitudinous enemies which seem to delight in ravaging the cotton field. On rich canebrake or bottom lands it is confidently believed that from five to eight tons per acre of these stalks can be produced, and this, sold at the lowest price named—say twenty dollars per ton—would pay the planter much better than the same land in cotton. The cost of

cultivation is very small; it is easily cured and the preparation for market is rapid and inexpensive. But it can be readily and profitably grown in the sandy and piney woods lands, and the lands in the neighborhood of the Chickasabogue Mills could be made to yield sufficiently of stalks to run or nearly run the mills. Women and children can cultivate the Okra plant, and with a reliable market close at hand can, from the sale of this product, make a comfortable living from a few acres of land. The *Tribune* understands that the Chickasabogue Mills will commence using the material as soon as a sufficient supply of it can be obtained, and as their consumption will, in all probability, equal one hundred tons per month, it will be seen, that there is every inducement for people, particularly in the pine woods section, to give early attention to the growth of this important fibre. If the manufacture at Mobile results as favorably as is anticipated, it requires no prophetic ken to discover what immense advantages are to accrue to the South. Other mills will speedily adopt this fibre, new mills will be started, and the time will not be distant when Southern manufacture will enter the markets of New York, Philadelphia, and Boston, and compete successfully at their own doors with the manufactures who have heretofore, with inferior products, monopolized, to a great extent, the paper supply of this country.

But the product adapted to the climate of Alabama which promises to rival and surpass the productiveness and value of cotton, without liability to the dangers which lie in wait for cotton every month of the year, is the *Ramie*, the beautiful cloth made from which, resembling silk in its fineness of texture, has attracted so much attention in Europe.

This new textile, lately introduced to Southern agriculturists, is a native of the Island of Java, and was first brought to Europe for investigation in 1844, where it received the botanical name of *Boehmeria Tenacissima*, and by the beauty and strength of its fibre, attracted much attention in manufacturing circles. Since that time every encouragement has been given to producers in the East Indies to induce them to cultivate Ramie in sufficient quantity to supply the demand; the result is that a considerable quantity is annually received in Europe and manufactured into fabrics of the finest quality, excelling in strength, beauty and finish, linen of the finest texture, and rivaling even silk in lustre.

Since its introduction into the United States in March, 1867, it has excited much interest among European manufacturers. They consider the fibre of the *Boehmeria Tenacissima* superior to that of any other textile plant, and very valuable for manufacturing purposes; the supply from the East is entirely inadequate to fill the demand, and unequal to the fibre here produced in quality; they are, therefore, very desirous

of seeing Ramie successfully cultivated in some country where the yield will be large and regular.

The soil and climate of the Southern States are particularly adapted for the cultivation of Ramie, which requires a loose, sandy soil, and temperate climate. These advantages can be secured in any of the cotton growing States.

At the present time most of our planters and farmers are financially crippled, and can not afford to expend the large sums necessary to secure the labor to make cotton and sugar profitable crops; both of these articles require large capital and continuous cultivation to bring them to perfection, and both may be injured or destroyed by unfavorable seasons, or other causes. Cotton may be totally destroyed by the army worm, or other insects. The fibre of Ramie, being contained in the inner bark of the stem, can not be injured in that way, and will not be hurt by either long-continued wet or dry weather; besides, it requires small capital to start a Ramie plantation, the plant being easily propagated and cultivated; it is a perennial, and will not require re-planting.

Those who have been interested in Ramie culture since its introduction in Louisiana in 1867, have made frequent experiments in extracting the fibre from the stem and preparing it for use, and have tried plants grown in that and other States with the most satisfactory results. They find that our fibre is even finer than that of Java, and that the yield per acre is greater. In any of the Cotton States Ramie can be harvested at least three times a year, each harvest or cutting will produce between nine and twelve hundred pounds, making an average annual crop of about three thousand pounds of crude unprepared fibre, worth at present in Europe ten cents specie per pound; in preparing the fibre for manufacturing purposes it loses about one-half, and increases in value to sixty-five cents per pound. Thus, it is apparent that Ramie, requiring little or no tillage to produce such magnificent results, is the most profitable crop that the planter can cultivate.

The fiber, when prepared for the spinner, is beautifully white, soft, and glossy, closely resembling floss silk in appearance; it is much stronger than the best flax, and readily receives the most difficult dyes without injury to its strength or lustre.

A rich, sandy soil is the most suitable for Ramie cultivation, and is particularly desirable for a nursery, where plants are to be rapidly propagated. For field culture the plant will thrive in any good sandy land. To secure a rapid and vigorous growth of roots, the land should be thoroughly and deeply broken up to a uniform depth of about ten

inches, and well pulverized. This is highly important, and should be carefully performed to insure a rapid accumulation of roots.

In propagating, level cultivation is preferable; root-cuttings should always be used for first planting.

After the ground has been thoroughly prepared, as above directed, the roots should be planted about six feet apart each way, three inches deep, and slantingly, with about one inch exposed above the surface; care should be taken to keep the ground moist around the roots when first planted. No further attention, with the exception of weeding, is required until the sprouts are about two feet high, when they should be gradually and gently inclined toward the earth. When they have attained a height of three or four feet, it will be noticed that they become of a brownish color near the root; they are then ready for propagation; incisions should then be made with a thin, sharp-pointed knife at each eye of the stem, which should then be bent gently down, and covered with about three or four inches of loose earth, care being taken to avoid detaching the stem from the parent root. About six inches of the leafy end should be left uncovered. In the course of three or four weeks these layers will have taken root, and may then be separated from the main root, divided in pieces, and re-planted. In planting in the field, layers may be laid down without being divided.

After the ground has been plowed deep and thoroughly broken up, it should be laid off in beds running the length of the field; these should be made about six inches high and four feet wide, with a flat surface; passages three feet wide should be left on each side, and cart-ways at intervals through the field. A shallow furrow might be run down the center of each bed; if roots are to be planted, they should be put in the ground slantingly, three inches deep and two feet apart, with end projecting above the ground; if layers are to be planted, they should be laid in a furrow, about three inches deep, horizontally, with the ends lapping, as in cane planting. After the first year's growth has been cut, new sprouts will issue from all parts of the bed; the growth will become very dense, and choke out all other vegetation.

When the stems have attained a height of six or eight feet, they are then ready to be harvested; but should it be inconvenient for the farmer to commence cutting at the time, the fibre will not be seriously injured if left in the field for a week or two longer. In cutting the stems, an ordinary cane-knife may be used, care being taken to cut the stem a little below the ground. It will also be advisable to extract the fibre when the stems are not too dry.

Ramie may be planted at any growing season of the year; the fall

and early in the spring being the best times for starting. It can not be injured by cold, unless the ground freezes to a depth greater than six inches, and continues frozen for several days. It is propagated only from root-cuttings. In preparing the fibre for market it will be to the advantage of the producer to ship it in its crude raw state, as very little expense will be incurred in so preparing it. In this condition it is worth ten cents per pound, in specie. In preparing it for the spinner a chemical process and costly machinery would be required. No doubt the increasing production of this new staple of the Cotton States will induce the erection of factories, and thus enable the planter to find a ready market at all times for the crude fibre

RIVER SYSTEM OF ALABAMA.

Navigable streams—The streams susceptible of navigation—Opening of valuable water courses—Message of Gov. Smith—Remarks of Professor Tuomey—The Coosa—The Warrior—The Cahaba, etc.

BEFORE describing the manufacturing and mineral regions of Alabama, it is necessary to glance at her system of natural and artificial water communications. Rivers are necessary to drive machinery, and both rivers and canals are necessary to transport heavy and bulky wares. The question of facility for cheap transportation and intercommunication, very properly follows a description of Alabama's agricultural resources, and anticipates a description of her unlocked treasures of the hills and mountains.

The navigable rivers of the State are the Tennessee, bordered by eight counties, and the best portion of whose valley lies in this State; the Alabama and its tributaries; the Tombigby, Black Warrior, and the Coosa. The Alabama is navigable for four hundred and eighty miles to Montgomery, and in high water to Wetumpka, at the mouth of the Coosa River, twenty miles higher. It passes through and bounds eleven counties. The Tombigby is navigable to Columbus, Mississippi, and passes through and bounds eight counties. The Black Warrior is navigable to Tuscaloosa, and waters two counties. The lower part of the Coosa is navigable from its mouth to Wetumpka, and the upper part from Greensport to Rome, Georgia. One hundred and eighty miles of its course between Wetumpka and Greensport, as its bed passes over the strike of the rocks, are not navigable—being a river navigable at

both ends and not in the center. Its navigable waters bound and water five counties. The Chattahoochee is the dividing line between Georgia and Alabama. This river is navigable as high up as Columbus, Georgia, and bounds three counties in Alabama. The heads of the Choctawhatchie and Escambia rivers of Florida give navigation to three counties. Thus it appears that thirty-two out of the fifty-three counties of the State are either bounded or intersected by navigable rivers, regarding the Mobile and Tensaw rivers as really a part of the Alabama. If we take into consideration the counties that nearly, but do not actually touch her navigable streams, it will appear that two-thirds of the State enjoy the benefit of navigable rivers.

The Tennessee River, which waters a most fertile section of North Alabama, from one side of the State to the other, flows northward after reaching the western boundary, and empties its water, with the Ohio, into the great highway of Western commerce. At present the shoals near Florence present an obstacle to the continuous navigation of this river. But, a few years will remove this obstacle, and by the assistance of the United States Government, the States of Tennessee and Alabama will soon see the Tennessee River opened to navigation from Knoxville to the Ohio. The curve which is made by the Tennessee brings it within thirty or forty miles at the nearest point (Gunter's Landing) to a point upon the Coosa River—Gadsden.

The Coosa River is navigable from Rome, Ga., to Greensport, Alabama, a distance of 160 miles. Below Greensport it is interrupted by shoals, which prevent a continuous navigation, just as the Tennessee is obstructed by the Muscle Shoals. The removal of obstructions in the Coosa River, or rather the surmounting of obstructions, by slack-water navigation, was brought to the attention of the country by President John Quincy Adams. Since then it has failed to elicit public consideration, until within the last ten years. Just before the war a survey was made which demonstrated the entire feasibility of rendering the Coosa navigable, and of connecting it with the waters of the Tennessee by a short railroad of thirty or forty miles (possibly by a canal), thereby giving, with that exception, and with the removal of Muscle Shoals, a continuous and short water line of communication from the hills and valleys of East Tennessee on the one side, and from the Ohio on the other, to the waters of the Gulf at Mobile. At the session of the Alabama Legislature of 1866, another survey of the Coosa was ordered, and was carried out by Mr. Thos. Pearsall, with most satisfactory results. At the session of the Legislature of 1868, after the reconstruction of the State, Gov. Wm. H. Smith considered the question of opening the Coosa

and Cahaba rivers, which flow into the Alabama, and the Warrior River, which flows into the Tombigby, of such vital importance as affecting the mineral interests of the State, that he brought the matter before the Assembly in a special message, and advised appropriations to be made for special and thorough surveys. The Governor said :

“It is gratifying to know that capitalists abroad are anxiously seeking information respecting the latent resources of Alabama, with a view of determining the question of making investments to develop them.

“Special inquiry is now being made in reference to the practicability of improving some of our rivers, so as to increase their navigable facilities. Some of the richest iron mines and coal fields of the State are situated on and near the upper Coosa, which is but partially navigable, and the Cahaba and upper Warrior, which are not navigable at all.

“Capitalists who are inclined to invest in these mines and fields, very naturally take into consideration the means of transporting their products to market.

“Hence the interest that is manifested in regard to the feasibility of rendering those streams navigable.

“In making such surveys, much valuable information might be incidentally collected, in regard to the mineral and other resources of the regions through which those streams flow. Our State abounds in rich iron beds, and coal fields; they are already attracting the notice of capitalists, although the facts as to their real value are but imperfectly known.

“With correct information properly disseminated, there is every reason to believe that the requisite capital would be brought into the State to open up communication with our mineral regions, either by improving rivers or by railways.

“In any event we should do everything that is practicable to invite capital among us. Much might be accomplished in this way by circulating reliable information respecting our material resources.

“For these general reasons I respectfully recommend an appropriation of such amount as the General Assembly may deem proper, to be applied to a survey of the rivers named, and the mineral regions contiguous to them. Capitalists abroad are frequently applying for information in reference to those rivers and mines; and the object desired is to collect it in an authentic form at as early a day as practicable.”

In accordance with this recommendation, the Legislature provided for proper surveys. When the surveys shall have been completed, and the results made known, there will be every reason to believe that capital will be found ready to open up such valuable highways.

Professor Tuomey, late geologist of the State, and Professor of Geology and Natural History in the University of Alabama, in his imperfect sketch of the geological formations of Alabama, gives us an account of her rivers, which, although brief, is worthy of notice as substantiating what has been already said in this connection. After alluding to the anomalous course of the Tennessee River, and to the fact that its complete navigation is interrupted by a fall of 85 feet over 15 miles of shoals, the Professor proceeds to speak of the two arms of the great rivers which flow from the mineral regions of North Alabama, through the cotton region of South Alabama, and at last to the Gulf:

"The rivers that form the Coosa rise in the basin between the southern extremities of the Blue Ridge and Alleghenies, in Georgia. The Blue Ridge, as if determined not to sink down at once into obscurity, has left a noble monument in that remarkable knob, the Stone Mountain. Coosa, from its rise to Greensport, in Cherokee county, flows along the strike of the rocks, and in a valley between the strata; it meets with scarcely any obstruction, and hence the remarkable phenomenon which it presents of a river navigable for steamboats at both extremities, with the intermediate part an impracticable rapid. It will be seen that between the places just named, the course of the river is northeast and southwest; at Greensport it turns directly south, and consequently crosses the edge of the strata, so that where these are hard and indestructible, rapids occur; but where limestone strata are crossed, a level reach is found. This state of things continues for a distance of 180 miles to Wetumpka, where the mica slates of the metamorphic rocks form the first obstruction and head of navigation.

"The navigation of a river 180 miles in length, passing through such a country as that through which the Coosa passes, appears to me so important a matter in connection with the prosperity of the State, that its improvement should enter into any scheme of internal improvement devised for its best interests. There are no formidable obstructions, but such as arise from sudden bends and accumulations of gravel, that a judicious expenditure of a few thousand dollars would not readily obviate.

"Between Wetumpka and the mouth of the Tallapoosa, the Coosa is a beautiful river, with high banks and deep water. At the junction, an accumulation of gravel takes place, which is the result of the lessening suddenly of the transporting force of the two rivers, by which the materials rolled onward by the streams are arrested in their progress, producing a bar and serious obstruction to navigation, which can only be remedied by the removal of the cause—that is, by making the streams to come together at a more favorable angle. The obstructions below this are

such as are common to all our rivers below the falls, resulting from abrupt bends, sudden widening, submerged logs, over-hanging timber, etc.

"It will be seen at a glance on the map how completely the upper Warrior conforms to the Warrior coal field. Rising on the verge of the Tennessee, it runs rapidly over the coal measures of the basin, which it drains. The fall of the Warrior between its source and Tuscaloosa is nearly 1,000 feet, or 5 feet in a mile, and between the latter place and Mobile the rivers that unite with the Warrior have a fall of only 161 feet, or 5 inches a mile. It is for this reason that the Warrior rises, during floods, to the height of 50 feet at Tuscaloosa; the water being suddenly checked and unable to escape with the rapidity of the rest of its course, it accumulates as it reaches Tuscaloosa.

"The obstructions in this river below the falls, and indeed in all the rivers that flow over the greatly inclined cretaceous and tertiary plane of the State, arise from deposits of gravel, sand, etc., that the river is no longer able to push forward. I am inclined to think that our rivers have become almost permanent, for certainly all the bars that I have observed between Tuscaloosa and Demopolis have not changed their form for years. From the yielding nature of the banks, such streams are subject to deflections, producing sudden bends that become serious obstructions.

"The great quantity of submerged timber is the result of the overflowing of the land by freshets, and the floating away of fallen trees; this, too, must have greatly diminished, and must still continue to diminish.

"The convergence of the Alabama toward the Tombigby, is the result of that dynamical law, "a body in motion will follow the line of least resistance." The former stream flows along the loose sandy strata that underlie the rotten limestone, until it reaches a low point in that stratum, through which it passes to unite with the Tombigby, and form the Mobile River.

"The rivers of Alabama, whether we consider them as one of the great physical features of the State, or in an economical point of view, are exceedingly interesting. There is scarcely any extensive and really valuable agricultural tract in the State that has not its navigable stream."

IMPORTANCE TO ALABAMA OF THE COOSA RIVER.

Connecting Mobile with Northwest Georgia—The Gulf and the Tennessee united—Pearsall's report—The water power—The case of the Schuylkill—The City of Pottsville—Cost of the work—Deposits of coal on the banks—Iron—Timber—Fertile valleys, etc.

THE opening of the Coosa River especially would be of untold advantage to Alabama. It would bring to the markets of Montgomery and Mobile a vast interior section of the State which now seeks an outlet in Georgia. It would furnish the cotton belt of the State with cheap grain and cheap fuel. It would supply the steam marine of the Gulf with coal, as will be more fully shown hereafter, in connection with a review of the minerals of the State. It would permit Mobile to compete with New Orleans as a depot for the export of Western grain. It would open up vast mines of iron and coal, which now lie useless upon the very banks of the river.

The importance of this work consists not only in its opening up a route cheaper than a railway, and against which no railway can compete, for heavy and bulky freights of grain, iron, coal, and marble, which will be furnished by the upland counties through which the river flows; but more especially in the splendid water power it will afford for manufacturing sites. This continental route will also, as we have said, permit Mobile to compete with New Orleans, as a grain depot for the trade of Europe and South America. The people of the West have long experienced the difficulty of shipping the cereals of the West to Europe by way of the lakes and railways of the North, which are so frequently frozen up for several months in the year. This difficulty has encouraged the shipment of grain to Liverpool by way of New Orleans. The Illinois Central Railroad, during the last year, arranged a shipment of 10,000 quarters of corn daily, for the Mississippi River, in expectation of orders from Europe for the purchase of corn at New Orleans, and during the latter part of the year large orders were sent from New York to purchase in interior Illinois and ship to Liverpool over New Orleans.

There can be no doubt that New Orleans will become a grander depot than she has ever yet been for the corn trade of the West with Europe. Why should not Mobile become a similar depot? With the Coosa opened, and with a short railroad or canal, of 25 miles, connecting the Coosa and Tennessee, and with the obstructions at Muscle Shoals over-

come, there is no reason why corn should not reach Mobile as cheaply by way of the Tennessee River and the Coosa as by way of the Mississippi to New Orleans. Taking Cairo as the starting point, the depot of the Central Illinois Railroad, we find that the distance by way of the Mississippi to New Orleans is 1,050 miles. But by the route through Alabama, from Cairo to Paducah is 48 miles; from Paducah to Florence, Alabama, is 250 miles; from Florence to Gunter's Landing, about 175 miles; 25 miles of railroad to the Coosa; from Gadsden to Greensport, about 30 miles; from Greensport to Montgomery, 200 miles; and from Montgomery to Mobile, 333 miles—total from Cairo to Mobile, by way of the Coosa River, 1,061 miles. It will be seen, therefore, that the Coosa River offers as short a line to the Gulf as does the Mississippi in point of distance, and much shorter in point of time, and far superior in point of safety, for all points in the Northwest. Not only would Alabama thus become a highway for a portion of the grain of the Northwest, but, with the completion of this work, she would certainly become the highway and afford the depot at Mobile for all exports from both Eastern and Middle Tennessee.

Indeed, a mere glance at the map must satisfy every intelligent mind that Alabama becomes the grand highway of the Mississippi Valley toward the Gulf, so soon as she breaks through the barrier which some convulsion of nature heaved up in the shape of the Apalachian range, and which turned the Tennessee River from the course which it was seeking toward the Gulf into an unnatural channel toward the North. As the Coosa partially escaped the catastrophe, and broke over the rocky barrier, a national work of untold importance will have been accomplished so soon as Nature is aided to resume her first intentions by connecting the waters of the Coosa and Tennessee artificially. There is no doubt that the opening of the Coosa will do for Alabama what De Witt Clinton's grand canal did for New York.

Mr. Pearsall, in his report of the survey of this river, which was printed by order of the Legislature of 1868, declares that the Coosa may be opened to navigation from its mouth to Rome, Georgia, for the sum of \$2,500,000, thereby connecting the ports of the Gulf with the interior of Northern Georgia.

Mr. Pearsall says that "an examination of the valley of the Coosa, from Rome, Georgia, to a point within forty-one miles of Wetumpka, a distance by water of two hundred and fifty miles, establishes the fact that the topographical features of the country are of surpassing beauty, rich in soil, abounding in minerals, and other valuable commodities, such as coal, iron, marble, and timber, all of which are of but little

value to the owners and less to the State, owing to the fact that none of these can, by any means now afforded, be transported to market, unless at an expense amounting to their value, or nearly so, when delivered.

"A section of the State thus bountifully supplied with the richest minerals in profusion, coal of superior quality, marble equal in fineness and beauty to the best Italian, timber, both pine and oak, of the best quality, and in quantity sufficient to furnish one hundred million of feet per annum for export for one hundred years, may well attract the attention of the State.

"Were this productive agricultural valley a barren waste, destitute of all vegetable productions except timber, wholly incapable of producing any of the cereals, even then, to reach the coal and timber, should stimulate the State to open the lower Coosa; not only as a source of annual revenue to its treasury, but for the benefit of the State at large, as it would add millions of wealth to its citizens.

"These two commodities are now worthless, except for the limited local demand along the valley; both would, in the event of the river being opened, become valuable as articles of export.

"Coal could be delivered at Mobile at a price not exceeding five dollars per ton, and sawed lumber, equal to the lumber of Florida, would find its way to the Gulf in large quantities annually.

"But the Coosa valley is not a barren waste. From Rome, Georgia, to a point within forty-one miles of Wetumpka, it is not surpassed in its agricultural capabilities by any section of the State.

"The opening of the lower Coosa to navigation, would invite immigration in great numbers; land would increase in price five fold, and that section would soon become the most populous and wealthy in the State. Water transit from Rome, Georgia, to Mobile, would command thousands of tons of freight from the northwestern counties of Georgia, and even Tennessee would contribute to swell the tonnage seeking the Gulf ports as a market."

Mr. Pearsall proceeds in his report to describe the bearings of this proposed work upon the commerce of the upper Tennessee River, to which allusion has already been made, and concludes that, even should the Muscle Shoals be surmounted, and the valley of the upper Tennessee prefer an outlet by way of the Mississippi River, the commerce of the Coosa valley would alone be sufficient to justify the cost of the work. He says:

"But, not looking to Georgia or Tennessee for one pound of freight, it may be confidently asserted that the valley of the Coosa contains within itself all the commodities, in great abundance, sought for by cap-

italists looking to profits from investments in railroads, canals, and slack-water navigation.

"Forty-seven years ago, a company of gentlemen, in the city of Philadelphia, conceived the idea, and immediately acted upon it, to so improve the river Schuylkill, from Philadelphia to the coal fields in the mountains, distant from the city 108 miles, by means of dams and locks, that boats of forty tons capacity could pass them. At that period, 1820, no city of Pottsville had an existence only on paper, where now, and for twenty-five years, a city with more than double the population of Montgomery, nearly all miners, occupies the slopes of the mountains.

"In 1820, there were not ten thousand inhabitants within thirty miles in any direction of where the city of Pottsville now graces the mountain slopes. At that time there was no demand for coal in the cities or elsewhere, as but few understood its qualities as a fuel. This company, however, had a survey of the river made, and the fall from its head waters, where the city of Pottsville now stands, to Philadelphia, was found to be 610 feet, and the distance 108 miles.

"The original cost of this work was \$2,500,000—equal to \$5,000,000 at the present time. It was soon discovered that the demand for coal exceeded the capacity of the boats employed, and that of the locks to pass them. The locks were enlarged, and higher and more substantial dams were constructed, so that boats of 150 tons burthen could pass them—at an expense of \$4,000,000. The capital stock was divided into shares of \$50 00 each. The work was completed in 1825, and for the first ten years thereafter, the shares commanded in the market about par; they then began to rise in value, and continued to rise until a share of \$50 commanded from \$170 to \$175.

"This stock has long since disappeared from the stock quotations, not being sold unless in cases where heirs to an estate wish to realize cash.

"This slack-water navigation penetrated a wild, mountainous, and barren region, almost destitute of timber and minerals, but it abounded in coal, and it was to reach that deposit by water transit, that the Schuylkill Navigation Company expended some \$7,000,000."

Mr. Pearsall continues as follows:

"The Tennessee River has been alluded to in this report, as one of the routes looking to the Gulf ports as a market, and I have endeavored to show that freights from that valley will tend strongly to the shorter and better route by the way of the Coosa and Alabama rivers.

"The Ohio has also been noticed, not with a view to prove that the Coosa improvements would draw freight from that quarter, but to show that that river, owing to the topography of its banks and the character

of its bed, can never be improved so as to render it navigable in low water.

"On its banks, and adjacent thereto, immense deposits of coal exist. Can that coal reach the Gulf ports and compete with Alabama coal? In the present state of that river, competition need not be feared—its navigation is obstructed by ice at least three months of the year, and by low water three or four months more. It may therefore be safely asserted that the Alabama coal fields can supply the commerce of the Gulf with coal without any serious competition for all coming time, unless some mode is discovered, not now known to science or the mechanic arts, which shall surpass in speed and cheapness the present modes of transportation.

"Slack-water lines of transportation will undoubtedly be required at no distant day, on other rivers in the State, beside the Coosa. The Schuylkill slack-water line from Philadelphia to Pottsville, was alluded to simply to present a case in point, touching the contemplated improvement of the lower Coosa. The former relies on coal alone, while the latter has not only coal, but iron, timber, etc., in abundance, together with a most productive country in all the cereals, for a distance of two hundred and fifty miles through which it passes."

IMPORTANCE TO ALABAMA OF THE CAHABA RIVER.

Opening of the Cahaba—Views of W. C. Bibb—The tonnage of the Schuylkill—Bibb county—Extent of coal fields—Practicability of opening—Relation to Mobile—Cost of the work—Cost of making pig iron—Necessity for cheap transportation, etc.

DURING the session of the Alabama Legislature of 1868, a bill being before that body asking State aid toward the opening of the Cahaba River to navigation, the following interesting facts, in support of the proposition, were published in the Mobile journals, in a series of letters from W. C. Bibb, Esq., of Montgomery, an old citizen, who is thoroughly acquainted with the resources of Alabama:

"The quantity of coal mined in Alabama is supposed to be 25,000 or 30,000 tons per annum and increasing. The quantity, though small, should not discourage us.

"The Pottsville, Shamokin, Lehigh and Wyoming coal regions of Pennsylvania, sent to market as follows:

1820.....	365 tons.	1850.....	3,321,126 tons.
1830.....	174,734 "	1860.....	8,143,928 "
1840.....	864,584 "	1868.....	11,000,000 "

Pig iron in round numbers:

1820.....	54,000 tons.	1850.....	600,000 tons.
1830.....	165,000 "	1860.....	884,474 "
1840.....	347,000 "	1864.....	1,200,000 "

"The report of the Engineer of the Schuylkill Navigation Company for 1844, says, 'that the tonnage of the Schuylkill valley is a million of tons annually,' and adds: 'This is a tonnage so immense that it is difficult for the mind to form an adequate idea of it.' And yet in 1867 it amounted to eleven millions of tons. Again: 'For several years after the navigation was brought into use, each boat carried about 25 tons,' but now ('44) 'they carry sixty tons, and the boats are drawn by horses.' With a boat carrying 60 tons, conveyed by horse power, seventy-five cents per ton is found to be a fair price for freight from Pottsville to Philadelphia, and it included the cost of unloading.

"In 1844 there were one hundred locks and dams to impede the passage of boats and add to the cost, in 108 miles. The number has since been reduced to 71, by raising their height. By looking at Professor Tuomey's Geological Map of this State, you will see that the Cahaba River enters the coal measures about six miles by land, above Centreville, in Bibb county. This county, I am assured by Mr. Graham, who was the assistant of Mr. Tuomey, is the richest in mineral wealth in this State, and our recent surveys fully confirm this opinion. The surveys have been made at our individual expense, running through the past two years, and have been confined mostly to a geological examination, and I have no doubt is the most accurate ever made of any portion of the State, showing the seams of coal exactly through the various sections of land, and the deposits of iron, marble, etc., all of which are found to exist in beds or seams of unusual thickness. There are 14 seams throughout the field of 300 square miles, underlying each other, and by deeper penetration many other seams may be found.

"With regard to the river, we have only satisfied ourselves that it can be opened at a small comparative cost. The measurements have been confined to about thirty miles of the stream, commencing at Centreville and going up. Below that point, the fall we suppose to be the same with the Alabama from Wetumpka, and the Warrior, from Tuscaloosa. Each of those towns are situated at the first shoals, and the two latter are at the same elevation with them. The fall is about five inches to the mile. Above Centreville the fall is about nineteen inches

for the first ten miles (per mile). This region is capable of supplying any demand that may be made upon it for coal, iron and marble; and I would here remark that the handsomest marble I ever saw came from this section, and seemed to be composed originally of small shells chrystalized, giving it, when polished, the appearance of a beautiful painting.

"Cheap coal and cheap iron will build up any city situated as Mobile is, with the facilities for shipment to any part of the world. There are also incidental advantages far beyond the market value of these articles in their crude state, which accrue from their affording the means of manufacturing. Pittsburg, with a population of 150,000 inhabitants, is situated two thousand miles, by way of the Mississippi River, from the Gulf, and with only seven months within which to ship her products, has been built up and sustained by coal and iron. Perhaps you may be surprised to learn that much of the iron she manufactures and sends to Mobile and other Southern markets is made from ore transported from Lake Superior and from Pilot Knob, in Missouri. The ore from Missouri is brought from one hundred miles inland to the Mississippi River, then down that river and up the Ohio River twelve hundred miles to her wharves, where it is manufactured into bar, pig and castings, and is then sent forth to market. Coal is delivered at Louisville, a distance of 466 23-100 miles, at \$1.12 per ton, and this includes the return of barges to Pittsburg. The Pennsylvanians have opened the Schuylkill River to navigation at a cost of \$12,000,000, by means of seventy-one locks and dams and forty miles of canal, on which horse power is used; and such is the scarcity of water that large reservoirs have been built to save it for use at many of the locks on the upper portion of the stream. They have thus overcome a fall of 618 feet in 108 13-100 miles; yet, notwithstanding all these difficulties and delays, coal is brought the entire length of the navigation at \$1.08 per ton. Now, compare these rates of freight by water with the cost by railroad. The Reading Railroad, which had a double track and all the appliances for a first-class coal road, carries coal 93 miles for \$2.18 per ton. The stock in the Schuylkill Company is worth \$240 per share of \$100, while that of the Reading Railroad is scarcely at par. The Cahaba River can be opened for about \$1,000,000 to perpetual navigation. The Schuylkill cost \$12,000,000, and is frozen up four months in the year. There is but little doubt that coal and iron might be delivered in Mobile at \$1 per ton freight. It would cost \$1.25 per ton to mine the coal, aggregating \$2.50 on the wharves of your city. The consumption of coal in and around the Gulf of Mexico is about 2,000,000 ton per annum, and rapidly increasing as steamers increase. The number of screw propellers built last year, as

compared with sail vessels, was in proportion of 180 per cent. of the former to 30 per cent. of the latter. At this rate of increase, there would be in a few years a demand for 10,000,000 tons of coal in the Gulf. With a constant supply of cheap coal, Mobile would monopolize the entire coal trade of that Gulf, and build herself up into an immense manufacturing city, supplying South America, the islands of the Gulf, and if a ship canal were built across the Isthmus, there would be no limit to her markets.

"Mr. Noble, of Rome, told me a few days since that it cost him \$13 per ton to make pig iron. Mr. Thomas, of Pennsylvania, told me that it cost him \$22 per ton in Lehigh county, Pennsylvania, and \$5 freight to New York. On the Cahaba River, coal, iron and lime may be found in juxtaposition, while in Pennsylvania they are brought from remote and opposite directions to a common center and manufactured. Hence the difference in the cost of manufacturing. You can not suppose that Pittsburg can bring her ore from Missouri, up stream 1,200 miles, and compete with Cahaba in its manufacture into pig iron. Suppose it cost \$13 to make pig iron on Cahaba; if that river were opened it could be freighted to Mobile for \$1 and to New York for \$4. This would be \$18 per ton versus Pennsylvania iron at same place at \$27 per ton. The capacity of the Cahaba for transportation would be equal to 10,000,000 tons per annum.

"But suppose the 2,000,000 tons of coal and 1,000,000 of iron were sent to the Mobile market, this would be more by 50 per cent. than the value of the whole cotton crop of Alabama. If this was accomplished, your meetings of citizens would be, not to inquire into the causes of her financial prostration, but to form stock companies to manufacture iron in its various shapes, cotton, wool, etc., such would be the extent of the accumulations of her citizens. Now a very liberal charter has been obtained for the opening of the Cahaba River, and if Mobile will raise \$400,000 cash it will insure the accomplishment of the enterprise. This river penetrates the Cahaba coal field one hundred miles, for which distance the coal may be seen at every bend jutting from its banks. A survey of the adjacent country develops the fact that seams of coal 12 feet thick and beds of iron, both of superior quality, from 50 to 100 feet thick may be found. Marble and other stone exist in great abundance. A railroad can not accomplish the development of the mineral region, for the reason that these heavy, cheap materials can not be transported at a rate so low as will compete with foreign coal in the Gulf, and there is the only market worthy of notice, the interior demand being too small to pay for working a mine.

IMPORTANCE TO ALABAMA OF THE TENNESSEE RIVER.

Muscle Shoals—Report of U. S. Engineer—Navigation of the Upper Tennessee—Its tributaries—Advantages of this section—Mineral wealth—Emery coal—A Coosa canal—Early and cheap wheat—Opinion of General Weitzel—Chattanooga Convention of 1869—Views of General Wilder—Harmony, etc.

By a glance at the map it will be seen that the Tennessee River passes from east to west through the entire breadth of North Alabama. The valley through which it passes is one of the most fertile and healthy in America. Unfortunately the navigation of this stream is interrupted by Muscle Shoals. Should those Shoals be surmounted, and we believe that the prospect is promising for speedy action in the matter by Congress and by the States interested, the valley of the Upper Tennessee, throughout the entire breadth of the cotton fields of Alabama, which lie upon its banks, and up into the valleys and hills of East Tennessee, would be thrown open to the commerce of the West.

The attention of the Government has been directed to the improvement of this river, from time to time during the last 40 years. In 1832, Congress voted the State of Alabama 400,000 acres of public lands to improve the navigation of the Tennessee with a canal round the Muscle Shoals. These lands proved insufficient, and we learn through the official reports of surveyors to the Engineer Bureau in Washington that these Shoals remain now as they were then—passable by steamers for only "three or four weeks in the year," and then exceedingly dangerous, and this, notwithstanding that for 300 miles thence up to Knoxville there is water enough during nine months annually, for steamers drawing three feet.

"From Brown's ferry," say these Reports, "a majestic river, broad, deep, and with gentle current at all times, is seen stretching for 100 miles above, through a valley abounding in the latent elements of prosperity; a river which, in this distance, is seldom seen to bear on its bosom a *pellicle of ice*, and a country whose climate is so genial that wheat is ripe for harvest by the time the green blades in the Northwestern States emerge from the snow.

"Yet, with this favorable combination of natural resources, the valley languishes for want of a cheap transportation to market; and this por-

tion of the river, for purposes of constant and certain navigation, is as sealed as though the river had no outlet to the Mississippi valley."

Indeed, steamers of that draft can go for six months during the year as high up as Kingsport, or the boat-yard on the Holston, and this river is so gentle in its descents, so free of dangerous rapids, that the people of East Tennessee were formerly supplied with salt, brought down in flat-boats from the salt works of Abingdon, Virginia.

The removal of these Shoals would also enable through boats of two feet draft, for six months of the year, to ascend above Knoxville 100 miles up the Little Tennessee, 153 up the Clinch, 75 up the Hiawassee, 125 miles up the French Broad, and 50 miles up Powell's River.

In short, the engineer adds: "There are 925 miles of natural navigation above the Muscle Shoals, with only three weeks precarious outlet at Muscle Shoals to the Lower Tennessee and Mississippi valley, from a region of whose drainage into the Tennessee embraces 15,000 square miles."

The navigation of these six tributaries can, he says, be easily improved still higher up from the above-named points, viz: that of the Holston, to the Virginia Salt Works; that of the Clinch, 50 miles; that of the Hiawassee, 100 miles; that of the French Broad, 100 miles, or as far as Ashville, North Carolina, and that of Powell's River, 50 miles; making a total length of inland navigation above the Muscle Shoals of 1,300 miles.

In the regions thus watered and drained, and shut up from the great commercial highways of the country, this Report and the Survey of the Tennessee river goes on to say that there "wheat matures six weeks earlier than in the Northwestern States; and brings the highest price in the New York market. While the Northwestern farmer has a rigorous winter to contend with, which compels him to house and feed his stock for six months in the year, stock can graze all winter in North Alabama, thus saving the farmer the labor of providing for it. The Northwestern farmer, moreover, has only six months in the year in which the weather will permit him to provide for his wants in the winter; while there is hardly a day in the year when the North Alabama farmer can not till his grounds.

"These advantages of this section of the country over the Northwest must have their weight; and when it is more generally known that the climate invites the farmer here, which permits the Malaga grape, the fig and pomegranate, to flourish in the open air in the vicinity of Chattanooga and Huntsville—a climate which has neither the rigorous winters of the North, nor the feverish summers of the extreme South—

immigration must be turned to the Tennessee valley. Its mild, uniform climate, fertile soil, pure air, and abundant water, its educational and social advantages, and a liberal policy to be pursued by large landholders, are points not to be disregarded by those seeking homes.

"The mineral wealth of the tributaries of the Tennessee River"—continues engineer Gaw, in his official report—"is no less than the agricultural resources of its valley. This region is fast becoming known to the people of the country as one of the richest sections in mineral deposits in the United States; while its merits as a stock-growing country are illustrated by the fact that from it both armies subsisted for nearly two years during the late war.

"With the opening of the Tennessee at Muscle Shoals, Emery River coal could be delivered at Decatur, Alabama, for 24 cents per bushel, and at Paducah, Kentucky, for 27 cents, without any interruption from the ice to the trade.

"According to the census of 1860, the amount of coal mined in Tennessee was 3,474,100 tons, fully three-fourths of which were from the Upper Tennessee, at Florence, Alabama. This trade would, in the course of time, receive another feeder from the mountains of Alabama, 30 miles from the river, where the coal is of a superior quality."

The Engineer here refers to the propriety of cutting a canal from the Tennessee to the Coosa River, which flows southward through the mountains to the Gulf, and very appropriately styles the Coosa, with such a canal connection, one of the feeders of the Tennessee.

He goes on to say that, with the opening up of the river, wheat could be transported to New Orleans for 20 cents per bushel, and thence to New York, making 32 cents from the Tennessee valley to New York, while freight from Dubuque, Iowa, to New York by rail is 68 cents, which the western farmers are now compelled to pay.

The report from which these interesting extracts are given, was made by Col. W. B. Gaw, Civil Engineer, under the direction of Maj.-Gen. Weitzel, U. S. A. Gen. Weitzel, in transmitting the report to Washington, indorses the recommendation for the construction of a canal around Muscle Shoals, in the following language:

"In addition to the many good reasons given in the appended report for making the improvement at this time, and to those which have been given by the many able men who have reported on this subject in forty years, there occurs to me that not only would a work be done which should have been done years ago, but which would have repaid the Government a large interest.

"I am perfectly confident if the distinguished soldiers who com-

manded our armies operating along the line of this river during the late war, should be called upon to testify in this matter, that it would be found that enough money would have been saved to the quartermaster's department by an improved river, in one campaign, to have trebly paid the expense of doing the work."

General Humphreys, in transmitting the report to Congress, urges the improvement strenuously, saying: "The Elk River Shoals, the two Muscle Shoals, and Gilbert's Shoals, all between Brown's Ferry, thirty-five miles above Florence and Waterloo, thirty miles below it, constitute the only formidable obstructions on the river below Chattanooga, and, if overcome, would open a navigation for nine months in the year throughout the whole length of the Tennessee River, and upon its tributaries. All other impediments are not insurmountable at most stages of the water."

The strength of the popular demand for the improvement of the Tennessee River—manifested during the past forty years, by resolutions of the Legislatures of Tennessee and Alabama, urging the action of Congress, by repeated surveys of the river under the acts of Congress in response to the demands of the people, and by insufficient appropriations by the General Government for the removal of the obstructions at the Muscle Shoals—has been increasing to the exact ratio to the development of the resources of the country, until within the past two years the enterprise has secured its indorsement as a national one by the great River Convention held at St. Louis, in 1866, as well as by the Merchants' National Convention of Philadelphia, Pennsylvania, in 1868; of the National Board of Trade at Cincinnati, in 1868, and of the great International Direct Trade Convention, held in Norfolk, Virginia, 14th of October, 1868, and through a popular convention, in Chattanooga, March 18, 1868—February 24, 1869. Through repeated resolutions of the Legislatures of Tennessee, Alabama, and Georgia, through the press of all parties, the people have urged upon Congress the necessity for this great work of internal improvement, until appropriations were granted in 1868 for the survey of the river, and for the removal of a few comparatively trivial obstructions in the upper and lower river.

The recent Convention of the States peculiarly interested in this work, held at Chattanooga, in February 1869, urged upon Congress to complete the work so auspiciously begun. At that Convention a few remarks were made by General Wilder, late of the Federal army, and commander of the famous Wilder's Cavalry, who is now engaged in manufacturing iron, just beyond the Alabama line, on the upper Tennessee.

It is interesting to note the opinions of such a man as General Wil-

der, as evidence not only of the importance of the work, but also as evidence of the advantages of North Alabama, and of the condition of the people. The report of his remarks, as published in a letter to the Cincinnati *Commercial*, is as follows :

"General Wilder began by saying that he could not make a speech, that he never had been a public speaker and never expected to, but that he could build furnaces and make iron. He said that about two years ago he came to this section in search of health, and his attention had been arrested by the immense amount of marble, iron ore and coal which he found every-where among the mountains. He took a course, and with a trusty companion journeyed down the Tennessee for a distance of over two hundred miles, stopping every few miles to examine the country. He became satisfied that it was the greatest mineral country in the world, and returning home he associated a few gentlemen of means with him, and they had gone to work and met with success far beyond their expectations. They were now digging hundreds of thousands of bushels of coal from their mines, and turning out immense quantities of the very best iron. He compared the expense of the Pittsburg iron manufactories with his own, showing what great advantages this country possesses over the manufacturing districts of Pennsylvania, in the cheapness of labor and provisions, and the salubrity of the climate. Tennessee River, said he, will never be closed by ice, and if we can only get the obstructions removed, he continued, it will float more wealth than the Ohio.

"The General then referred to his experience in the South, saying that if a man would only *half way* behave himself here, he would find no difficulty whatever on account of politics or place of birth. 'I came from Indiana,' said the General, 'and I have never been treated better anywhere, nor by any people, than here in Tennessee, and by the people of Tennessee.' His speech was delivered in a conversational way, and I never yet have seen a speaker who held his audience as spell-bound as did General Wilder. At the conclusion, he was greeted with the most tremendous applause. Colonel Cox, of Huntsville, arose, and said that General Wilder had started out by saying that he could not make a speech ; 'yet,' said Colonel Cox, 'I have heard thousands of speeches in the United States, and in foreign countries, but I never heard so good a speech as the one just delivered by General Wilder.' He appealed to the Convention to sustain him in this, and they did so with a will. To-night General Wilder's praise is in everybody's mouth, and as I hurriedly write, I hear two ex-rebels wishing that there were a thousand more Wilders up North who would come down here.

“General O’Neil, of Alabama, was next called for, and delivered an eloquent address. He spoke of General Wilder as his friend—‘though,’ said he, ‘I have never spoken to him in my life, nor ever saw him before, yet all such men as he are my friends, and the friends of every man in the South.’”

THE ALABAMA WATER LINE.

A canal from the Coosa to the Tennessee—Its practicability—Opinion of Matthew F. Maury—Testimony of M. H. Cruikshanks—Views of Engineer Gaw—Vast importance of the line—Connection of Mobile with the West—Connection with Virginia—Superiority over other lines, etc.

GERMANE to the question of completing the navigation of the Tennessee, it is proper to allude to the declaration made by Colonel Gaw, in his report to General Weitzel, that a canal of thirty or forty miles, from the Tennessee to the Coosa, would make the latter stream a feeder to the former.

It has already been shown that the opening of the Tennessee and of the Coosa, at an insignificant expense in comparison with the results which would follow, would bring the navigation of those streams within a few miles of each other. By breaking through the obstruction with a short canal, there would be uninterrupted navigation by a cheap water line, from the most distant regions of the Northwest to the safe and commodious harbor of lower Mobile Bay. And again, there would be water navigation from Mobile Bay to the salt-works of Virginia.

The question of opening up this grand “Alabama Water Line” as a highway from the cis-Mississippi Valley to the Gulf, and from the cotton fields of Alabama to Norfolk, by way of the James River and Kanawha Canal, has been urged upon public attention for the past few years. Until lately, however, it has not been known whether there was a practicable route for a canal between the two streams. But now the report of Colonel Gaw, and a subsequent report of Commodore Maury, to the Superintendent of the Virginia Military Institute, respecting the commercial advantages of Virginia, leave no doubt of the practicability of such a water-line.

The opinion of so distinguished a geographer as Maury, would be alone sufficient to stamp the suggestion as of supreme importance. But

his opinion is confirmed by the testimony of those who are acquainted with the topography of the State, from actual observation.

The *Talladega Reporter*, published in the mountain region of Alabama, and edited by Hon. M. H. Cruikshank, a gentleman of intelligence and thoroughly conversant with the history and resources of that portion of Alabama, has the following reference to the subject :

"It is perhaps not generally known that Wills' Creek, one of the tributaries of the Coosa River, has its source within a mile of the Tennessee River, and that the intervening space is comparatively level. Old settlers have all insisted that the waters of the Tennessee River might be brought through to the Coosa by way of Wills' Creek, at comparatively small cost. What a grand idea there is in that suggestion! Think of boats loading away up in East Tennessee, on the borders of Virginia or Western North Carolina, and coming down the Coosa, thence to the Alabama and on to Mobile! What a line of trade! How much undeveloped wealth would be brought to light? How many towns would be built up, and what teeming hives of industry would spring into life!"

Colonel Gaw alludes to this "Alabama Water Line" in his report, as follows :

"In examining on the map the anomalous course of the Tennessee River, it is observed to approach very closely to the rivers of the Gulf slope.

"At Guntersville the distance between the Tennessee and Coosa rivers at Gadsden, is only 45 miles." (The distance by a straight line from Gunter's Landing to Gadsden is not more than 25 miles, though the navigable waters of the Coosa and Tennessee approach still more closely.)

"As the obstructions of the islands below Gadsden, on the Coosa, will be surmounted in time, it becomes an interesting question as to whether a water connection by canal can be made between the Tennessee and Coosa rivers at Guntersville and Gadsden, thus making a direct water communication from the Tennessee valley to the Gulf.

"The topography of this part of the country indicates the feasibility of this work, and from the records of the Gadsden and Guntersville Railway survey (32 miles in length) sufficient data might be obtained to determine the magnitude of the undertaking, but the commercial advantages that would attend the construction of this work are so great as to demand an examination of the country with this special view.

"Another locality inviting attention is that between Ashville, North Carolina, mentioned as the head of future slack-water navigation on the French, Broad, and Catawba rivers, in North Carolina, emptying into

the Atlantic Ocean. This distance is about 40 miles. No opinion can yet be advanced as to the practicability of this enterprise, but it is entitled to notice in this bird's-eye view of the Tennessee Valley.

"It is by such a broad and comprehensive view of the subject that we obtained a proper estimate of the interests involved in the removal of the difficulties to navigation as Muscle Shoals.

"These interests are not confined to the Tennessee Valley, but may in time be made to affect the Gulf and Atlantic coasts, for the impetus which would be given to commerce and trade in the Tennessee Valley by this improvement, would demand the slack-water improvement of its tributaries pointed out, and then, in time, as the country became fully developed, would lead to the consummation of a direct connection by water of the Tennessee Valley and the waters of the Atlantic and Gulf."

The comprehensive view taken by Colonel Gaw in his report is commented upon approvingly, and expanded upon, by Commodore Mathew F. Maury, in a recent preliminary report upon a "Physical Survey of Virginia." The report is published from the "Office of Physical Survey," of the Lexington (Virginia) Military Institute.

Commodore Maury says:

"The physical geography and climates of Virginia admit of a route (between the Atlantic and the Mississippi Valley), which, better than any other, satisfies these requirements, and completely fulfills these conditions—(cheapness in peace and safety in war).

"The former admit, and the latter call, for two great national routes, each consisting, one temporarily, the other permanently, perhaps, of a rail and a water line between the tide-water harbors of Virginia and the navigable tributaries of the Mississippi and Alabama rivers.

"Each of these routes is partly completed, one leading from tide-water to the Southwest, and which it is proposed now to extend down the Holston into the Tennessee, and down this stream to the Ohio River, with a branch at Gunter's Landing, through the Coosa Canal and the Alabama River to the Gulf of Mexico.

"The other route leads to the Northwest, and consists of the James River and Kanawha Canal as its water line, and the Chesapeake and Ohio Railroad as its iron way. The latter route has been fully described, the former has been merely alluded to.

"The Coosa and the Tennessee route call for the completion forthwith of improvements required to give uninterrupted steamboat naviga-

tion from the Gulf of Mexico through the Alabama and the Coosa into the Tennessee, and thence into Virginia.

"A company has been incorporated for improving the navigation of the Coosa River, so as to open it for steamboats from Rome, in Georgia, *via* the Alabama River to Mobile. A canal has also been proposed, to pass steamboats from the Coosa over into the Tennessee at Gunter's Landing. These two rivers approach each other within 25 miles. I am not aware that any surveys have been made for a canal across this isthmus. But be its topography never so difficult, the work is a *national necessity*, and therefore sooner or later must be built. The practicability of all the other parts and links in these two routes, has been determined by actual examination and survey. A corps of United States engineers is, at the national expense, now improving the navigation of the Tennessee River for steamers of 750 tons, from its mouth to Chattanooga. The extension of these improvements thence to Saltville, in Virginia; the construction thence of a double-track freighting railway to the James River Canal at Lynchburg, are the improvements called for in this direction. They are required to furnish the majority of the people in the Gulf States with a cheaper and shorter route in peace than any they now have to the Atlantic seaboard, and with a safe one in war.

"These links being complete, they will form a composite line of railway, river and canal, of 874 miles between Hampton Roads and the great Southern bend of the Tennessee River at Gunter's Landing, in Alabama. The Virginia and Tennessee Railroad, with connections extending to the Gulf of Mexico, to the Mississippi River, to the Cumberland and Ohio, lies along this route, and though but a single track, it is already competing with other routes for the transportation of cotton from points as far distant as Memphis and Selma, delivering it in Norfolk as cheaply as by existing routes it is carried to New York."

Commodore Maury continues: "There is at present natural navigability from Mobile up the Alabama River to Wetumpka, on the Coosa; here the ledge, which crops out to form the Muscle Shoals of the Tennessee, interrupts navigation and forms a portage of 180 miles; after which the river again becomes navigable, and steamers ply on it regularly thence to Rome, Georgia. A canal over from the Coosa to the Tennessee would open an inland communication between the Chesapeake Bay and the Gulf of Mexico, that would be of the utmost importance in war.

"It would be from Montgomery and Mobile almost as direct as an air-line, with only 176 miles of railway, and that a national double

track for the accommodation of trade in peace, the speedy transportation of supplies and munitions and troops in war.

"Rather than risk the dangers of the Florida Pass, shippers in Mobile now prefer 160 miles of rail from Cedar Keys to Fernandina, in Florida, with a delay of several days and all the expense, loss and inconvenience involved in two transshipments—one from ship to rail—the other from rail to ship.

"Let us inquire what is the distance saved by this route *across*, instead of *around*, this peninsula. Only 336 miles of sea transportation; and for that, 160 miles by rail is substituted—*e. g.*:

Mobile to New York by sea.....	1,628 miles.
Mobile to Cedar Keys by sea.....	291
Cedar Keys to Fernandina by rail.....	160
Fernandina to New York.....	841=1,292

"From Mobile to New York is a sea voyage. Ordinarily the proportional expenses of 336 miles in such a voyage is covered by the cost for 40 miles of railway transportation.

"But these 336 miles lead through the Florida Pass; and rather than incur the risk of that dangerous navigation, four times the equivalent of railway transportation, with the delays and expenses of two transshipments, are preferred.

"As a great national work, both commercial, political and defensive in its aspects, this fact seems not to have made a lodgment in the public mind—viz: that if this great Southwestern route were completed on the scale and in the manner now suggested, there would meet at Gunter's Landing two inland and national water lines, as useful in peace as in war—one from the Gulf of Mexico, *via* the Alabama and Coosa rivers, through a steamboat canal of not over 30 miles long, to the Tennessee. The other, through all the western tributaries of the Mississippi, above and below the mouth of the Ohio, thence up the Tennessee to the junction of the Coosa Canal, and so up the Tennessee to the Holston at Saltville, and thence by rail and water through Virginia to Hampton Roads."

It does not lie within the province of a work confining itself to a description of the resources of Alabama, to enter upon an argument to prove the superiority of the "Alabama Water Line" over all others, for the transportation of Western products to the Gulf. But it may be proper to allude to the absolute *necessity* of opening up this route. When the necessity is once established, then it follows that its bearings, even before completion, upon the interests of the State whose entire

length, both ways, is traversed by the route, is a proper subject for consideration, in treating of the advantages offered by Alabama to settlers. With a cheap water-line cutting through every section of the State, from east to west, and from north to south; with tremendous water power down the Coosa and the canal for 200 miles; and with the cotton growing, and the minerals cropping out upon the banks of the streams, and at the very gates of the locks and dams, it follows that those who desire cheap lands, convenient homes, and opportunities for enterprise, have nothing to do but to unlock the door whose key is already forged.

The necessity for the "Alabama Water Line" is, therefore, a matter for consideration in this connection.

NECESSITY FOR THE ALABAMA WATER LINE.

Want of transportation for Western products—Views of Sir Morton Peto—Opinion of the Census Superintendent—Difficulties of the Lake route—The Mississippi route—Mobile Bay—Tonnage of the West—Views of a Canadian—Demand for new routes to the Gulf, etc.

SIR MORTON PETO, in his interesting work on the Resources and Prospects of America, makes the following truthful observations:

"How far is the amount of tonnage employed in inland intercourse in America adequate to the wants of the country? In considering this point we have to regard the very great lengths over which traffic has to be carried; and looking at those distances, no reasonable doubt can be entertained that *the inland navigation of America is very inadequate to the wants of the people. It has not, in fact, kept pace with the population and progress of the country*; and if it were not for the railroads, the great producing districts of the United States would be at a stand-still for want of means of transport for their produce. There is a period of the year when the canals are frozen up. The whole task of conveyance then falls upon the railways; and the consequence is, not only an immediate rise in their rates, but absolute inability to conduct the traffic. The results are often most disastrous. In one case 40,000 barrels of flour were detained at Toledo (nearly half way between Chicago and New York) for several months, in consequence of want of carriage. A vast mass of produce is yearly destroyed from the inability of the carriers to forward it. The owners are ruined, and parties in the Eastern States, who advance money on this produce, charge excessive rates to

cover the risks of delay. *The grain producers of the Western States are quite unable to find sufficient means of conveyance for their products, because the railroads from west to east are choked with traffic. The existing railroad requirements of the West are, in fact, insufficient. At present, because they can not carry the produce, the whole traffic of the country is subject to two gigantic evils, arising, first, from uncertainty of conveyance; and second, from uncertainty of charge. The present railways are quite insufficient for the growing traffic. The lines of communication from the West, by canal, etc., which existed previously to railways, have not been affected by their construction. The produce of the Western States has, in fact, increased faster than the means of transport, and additional facilities for the conveyance of goods are urgently required. It is of the utmost importance to the development of the West that no time should be lost in making this additional provision. An inadequate railroad provision and a corresponding uncertainty as to conveyance and delivery of freights, must have the effect of checking production in the West, and consequently, of checking capital of the East from seeking employment in the West. Railway facilities are now the measure of the prosperity of the country.*

“Now, what is the effect of this inadequacy of transportation? The producer, the merchant, the railway company and the consumer, are all directly injured; but the indirect injury extends far beyond those interests. The whole produce of the West, and consequently the entire cultivation of America, is affected. If the produce can not be carried, it can only find local markets. If it only finds local markets, prices must abate. If prices abate, the stimulus to the cultivation of land is lost. If the land is not required for cultivation, in the same proportion it necessarily diminishes in value. The prosperity of the West, the value of its produce, the value of its land, and the extent of land cultivated—all depend, therefore, upon increased facilities for the conveyance of produce, and those facilities, canals and railroads must afford. The American public ought never to be satisfied until they are able to calculate on fixed moderate prices for freight, and fixed periods for its delivery. The future of the West depends upon ample means of communication with the East; and the success of its means of communication with the East is expressed in a few words: ‘Prompt and economical delivery—in a fixed time and at a fixed price.’”

Remarking upon the subject of transportation for Western trade, the Superintendent of the census says:

“When it is considered that the production of grain in the Northwestern States increased from 218,463,583 bushels in 1840, to 642,-

120,366 bushels in 1860; and that of the eight food-producing States west of the lakes, embracing an area of 262,549,000 acres, only about 52,000,000 acres were under cultivation in 1860, and that 26,000,000 acres of that have been broken since 1850, no fears need be entertained that any of the outlets to the ocean will be unoccupied to the extent of their capacity. *The only fear is, that we will not keep pace with the increased production by the provision of increased facilities of transportation."*

These views are sustained by a consideration of the cost of railroad transportation over water transportation, and by the fact that the Northern water lines, by way of the lakes, are impeded by ice for several months of the year, and that no immediately practicable outlets for Western products are admissible, except the natural route down the Mississippi River, which will soon have a new mouth at Mobile, by way of the English Turn Canal, connecting the River and Lake Borgne, and the proposed route by way of the Coosa Canal, directly to Mobile Bay. The Virginia route by the proposed canal to connect the Chesapeake Bay and the Ohio River, may be attainable at some far distant day; but, judging from the fact that the part of the canal which is already completed, and which passes over the easiest portion of the route, has been a quarter of a century in building, we are not led to expect anything definite from that central line for a long time to come. The proposition to carry a canal across the mountains of Virginia, is a most herculean one. It is a splendid conception, but the country will hardly see a fruition of the vision until long after the day when the Coosa is opened, and a canal is cut around Muscle Shoals—giving the West, at Cairo, two water lines to the ocean.

Keeping in mind the sensible remarks of Sir Morton Peto, let us glance at the necessity which will urge the construction of the Alabama Water Line, and build up a water power which will fringe it with factories, furnaces, villages and cities.

There are now but two routes of continuous navigation by which Western products can obtain outlet—that by the Northern lakes and that by the Mexican gulf. The former, besides being liable to the casualties of climate (five months of interruption by ice), is so circuitous that it requires the products of our very extended country to pass beyond its boundaries in seeking their way to its own markets. This tedious circuit, while it is at all times objectionable on the score of time and cost, is most especially so whenever the nation becomes, or is in danger of becoming, involved in hostilities with a maritime power. During the recent war with a domestic power, whose ports were rigidly blockaded;

this evil was most sensibly felt, even with reference to the route by the lakes. What might not the evil be in the event of a war with Great Britain?

The great length of this circuitous line of water transit, and the non-existence, up to the present time, of any continuous line of navigation directly across the country from the centers of the interior to the center of the seaboard, have compelled a resort to the policy of substituting railroad transportation over the direct routes. But although the cost of carriage has been much cheapened on these works, they can not be thrown open to general use and free competition. Meantime water transportation has itself undergone very great improvements, which have had the effect of reducing freights far below any possible minimum at which railroads can afford them. It is now practicable, on lines of unbroken navigation, for the heaviest classes of agricultural and mineral products to be borne, from distances exceeding five thousand miles in the interior, to the seaboard, at charges by no means prohibitory.

Even at present the great bulk of Western trade avoids the direct transit across the country afforded by the railroads, and seeks the circuitous and more or less hazardous route of the lakes, on account of cheapness.

In the year 1868, large quantities of grain were shipped from Chicago to New York by way of New Orleans, and notwithstanding a portion of the route was by railway, a large saving was made in the cost of freights. In an able paper on the duty of the Federal government, in connection with the navigation of the Mississippi River and its tributaries, Professor Sylvester Waterhouse, of St. Louis, remarks: "Under all the existing difficulties (of this navigation), the freight of cereals from the upper Mississippi to New York, is far cheaper by way of New Orleans than it is by the lakes and the New York canal. The comparative rates of transportation from Dubuque, Iowa, to New York, are:

Via the lakes.....	68 cents per bushel.
Via New Orleans.....	38 cents per bushel.
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Difference in favor of Southern route.....	30 cents.

"The present cost of shipping grain from Chicago to Cairo *by rail*, and thence *via* New Orleans to New York by water, is no greater than the freight to the same point by way of the lakes. The existing water tariff on wheat in bulk from Chicago to New York, is:

By the lakes	44 cents.
From Chicago to Cairo, by rail.....	20 cents.
From Cairo to New Orleans, by water.....	12 cents.
From New Orleans to New York, by water	12 cents.

"So extreme is the cheapness of river carriage, that the rates of the Southern route, increased by 800 miles of costly railroad transit, do not exceed those of the Northern line. If we take a point on the Mississippi south of the latitude of Chicago, such as Dubuque, the saving is 30 cents a bushel by the New Orleans route. This gives 38 cents as the cost; and it is believed that after the improvement of the rapids of the Mississippi, and the erection of elevators for the transfer of grain in bulk, the freight of cereals from the upper Mississippi to New York, by way of New Orleans, will be reduced to 25 cents per bushel."

Such a reduction, and even the present low rates, will powerfully affect the movement of Western grain; for even as early as in 1865, out of 48,000,000 bushels of grain shipped to Chicago, 15,000,000 were brought from points on the Mississippi; and it is officially stated that three-fifths of all the wheat received in 1865, at Milwaukee and Chicago, came from the towns on the banks of the Mississippi.

It follows from this, that the great bulk of Western products must seek an outlet to market by the natural water routes to the gulf. These two routes, the one down the Mississippi and through the English Turn Canal and Mississippi Sound to Mobile Bay, and the other up the Tennessee and down the Coosa, also to Mobile Bay, present the only constant and capable routes which are open to the West.

The great Northwest has outgrown the Northern routes to the Atlantic. The tonnage of Western products in 1860 was 33,000,000. Of this amount 20,000,000 could have been spared for market, as it is estimated that in a fertile country three-fifths of the productions are surplus. Instead of 20,000,000 tons being exported to market in that year, the amount was but 5,500,000. The facilities were not adequate in capacity, nor were the charges of transit sufficiently low, to permit so vast an eastward movement of tonnage. In a comparative sense, the actual movement of tonnage, as late as 1862, while the stimulus of war prices was active in bringing it forward, was very meagre.

"In 1862," says the report of the Board of Trade and Commerce of Buffalo, 1865, "the surplus products of the West sent eastward (*through trade*) to the tidewater markets, including products of wood, agriculture, animals, manufactures, and miscellaneous commodities, was 5,176,499

tons. This includes the eastward movement of through freight over the four great roads of the United States, and the Grand Trunk and Northern railways, and the total exports from Buffalo and Oswego by canal. If the way freights received at the Western terminal points of all these railways, and delivered in the interior, be added to the *through* freight, it is estimated that the total number of tons moved out of the West during that year exceeded 5,500,000. Of the eastward movement in 1862, 2,080,656 were sent from Buffalo, and 638,419 tons from Oswego, *making nearly fifty per cent. of the total movement by the New York canals*, and the remaining portion by the five through lines of railroad."

Thus, it seems, that the great public works of the country already in operation, did not attract from their places of production, nor transport, one-third of the products which the West could actually have spared. If the whole exportable production had offered itself for transit, it could not have been carried; and it did not offer itself; because the cost of carriage on a vast proportion of the exportable products was not low enough to tempt them forward.

Since 1860 the routes of transportation have not materially increased, but the productions of the West have been increasing at the rate of sixty-five per cent. in each decade.

Mr. Kingsford, an intelligent Canadian, arguing in favor of the Canadian route from the lakes down the St. Lawrence, furnishes strong indirect arguments in favor of the Southern routes. He says:

"The commerce of the Northwest is not any fanciful speculation, nor is its magnitude in any way questionable. It is a reality, as inquiry will establish. It has *outgrown the Erie Canal*, and the complaint of the West is that the quantity carried is so immense, that carriers can command their own terms. The condition of the producers of the West has been described, without exaggeration, as that of men shut out from the markets of the world, oppressed by the excessive production of their own toil, which remains wasting and worthless upon their hands, depriving labor of half its reward, discouraging industry, and paralyzing enterprise.

"In many localities the produce is even without value, for it is without a market. It is estimated that five hundred million bushels of Indian corn or maize are raised in the Northwest; but not five per cent. of this amount finds its way to the seaboard, owing to the expense of getting it there; and that out of the *sixty cents* paid in New England for a bushel of corn, only *nine cents* goes to the producer; the remainder being expended in freights and commission. It is this sense of inferi-

ority of position which has hitherto led to great discontent in the West.
 * * * * We can, therefore, readily understand why, in the Northwest, public attention has been turned to the Mississippi.

“What the State of Illinois asks is a direct trade between the Northwest States and Liverpool, on the plea ‘that the increasing volume of business can not be maintained without recourse to the natural outlet of the lakes.’ If this opportunity be vouchsafed, *and the requisite facilities be given, the surplus produce will be increased with a rapidity even beyond that of the past century.* It is estimated that from the State of Illinois alone, there has been shipped annually, for the last ten years, a surplus of food sufficient to feed ten millions of people, and at the same time, there has been a positive waste from the inability to bring the crops profitably to market.”

While these gentlemen of the lakes are contending for the merits of their routes, which are ice-bound half the year, Alabama offers them a route which can be opened up for five millions of dollars, and admit the passage of barges all the year round. At the end of the route it gives the splendid harbor of lower Mobile Bay, and with a short canal, would give the better harbor of Pensacola. All along the route it furnishes return cargoes.

To all points above the mouth of the Ohio River, the Alabama Water Line offers as short a route as does the Mississippi River, and equal advantages in all other respects. To the vast region watered by the Tennessee and her tributaries, it offers the shortest, cheapest, and most natural outlet to market.

The West, having outgrown the lake routes of the North, demands new routes to the Gulf. If the bars at the mouth of the Mississippi impede the approach of great grain ships to New Orleans, then she demands that her barges be taken directly through to Mobile Bay.

When this route is once opened, the mines and cotton fields of Alabama will build a Lowell at Muscle Shoals, and at every lock and dam of the Coosa River!

MANUFACTURING REGION OF ALABAMA.

Eligible sites for factories—Railroad conveniences—Climate advantages of the South for manufacturing—Distinguished testimony—Fortunes made by Northern men—Opinion of Governor Patton—Successful factories—Views of foreigners, etc.

THIS section lies immediately north of the cotton region, and extends eastwardly and westwardly across the State. On its western edge it has a width of eighteen miles, at its middle part a width of thirty miles; and on its western boundary a width of fifty miles.

The soil, consisting mostly of sand, is poor, and the surface is broken. It is, however, traversed by numerous never-failing streams, affording good water power, which must prove valuable on account of proximity to the cotton and provision producing country on the south, and to the coal and iron deposits in the section immediately north of it.

It has, through its middle part, running from north to south, the Selma and Rome Railroad; and in its southwest corner, the Montgomery and West Point Railroad. It is also traversed by the partially constructed railroads, the Chattanooga and Alabama and the South and North. The health is good.

No more eligible sites for manufacturing establishments can be found than in this section of Alabama. The rivers flowing from the mountains meet with many rugged barriers before they reach the low lands of the South. The soft cretaceous and tertiary formations admit of deep excavations, while the metamorphic and silurian rocks, with the millstone grit, resist the erosive action of the water, thus furnishing numerous falls, from which the current can be conducted economically and used for turning machinery of all kinds. Tuscaloosa, Scottsville, Prattville, Antaugaville, Tallassee, and the factories of North Alabama, show what can be done, even under most adverse circumstances, and point unmistakably to our capabilities in this direction.

This manufacturing region of Alabama lies immediately upon the high-road between New York and New Orleans. At present it is reached directly by the Rome and Selma Railroad, which traverses its entire length, but not immediately upon a direct line. A more direct line between the two great emporiums, will be the Alabama and Chattanooga Railroad, which is now in progress of building by a Northern

company, under the presidency of Mr. Stanton, of Boston. This latter road traverses the manufacturing and mineral regions of Alabama from Chattanooga, in a southwest direction, through Wills' Valley, Elyton, Tuscaloosa, and thence on to Meridian, in Mississippi. Until, however, this road is completed, the Rome and Selma Road presents the immediate gateway from the North to the heart of the mineral wealth and water power of Alabama. The following remarks of Eugene Le Hardy, Chief Engineer of the Selma and Rome Road, made to the Directory before the completion of that road, presents, in a few words, the prominent features of this section of the State of which we are speaking:

"Between New York and New Orleans the routes now nearest the 'air line' between said cities are, as far as Dalton, those passing by Philadelphia, Baltimore, Washington, Lynchburg, Bristol and Knoxville. Rome, Jacksonville and Selma, are very nearly on the same air line, which is an indication that the *natural route must be continued through these points*, while the route which is pretended to be the shortest passes by Charlotte, North Carolina, more than one hundred miles off the air line. The distance between the two cities, New York and New Orleans, as actually run, according to *Appleton's Railway Guide*, by way of Chattanooga, Grand Junction and Jackson, is 1,502 miles, and by way of Dalton, Selma, Meridian and Jackson, is 1,472, which could be reduced to about 1,327 miles, if the line, *as it will be eventually*, was made direct from Selma to New Orleans, which would prove a saving in distance of 175 miles on the former route, and of 145 on the latter.

"All the belt of country traversed by your road is particularly attractive by its picturesque and varied scenery, by the splendor of its vegetation, by the richness of its soil, not only in vegetable products of all descriptions, but in its inexhaustible mineral wealth, *which only awaits this communication with the markets to insure its rapid development*. The altitude of your line ranging from 400 to 1,000 feet above the sea, and its course through valleys formed by spurs of the great chain of the Allegheny mountains, are unmistakable indications of the moderation and healthfulness of its climate all the year round; and it is not extravagant to foresee or to predict that this portion of country, when attention, by means of this road, shall have been directed to it, will become the preferred home of the rich as well as the poor, of the North as also the South. The salubrity of the climate and mildness of the winter will offer great inducements to the wealthy and middle classes to settle in our midst, in summer to enjoy the refreshing breezes of our mountainous regions, and in winter to avoid the cold blasts of a North-

ern climate. All this region is particularly favored with streams and abundance of water power that never freezes; timber is abundant; coal and iron, those two great powers of civilization and progress, inexhaustible. The land along the route yields most abundantly all the necessities of life. The climate, as already stated, is temperate, mild and healthy. We find in it all the necessary conditions and elements to make it a favored land for laborers, and, consequently, the great manufacturing land of America, the only one on this continent capable in the future to compete with the manufactories of Europe."

Mr. James Montgomery, the author of several standard works on the manufacture of cotton in Europe and America, and very high authority on all subjects connected with manufacturing, a few years ago made the following statements of the advantages of this section for manufacturing, after having made a personal examination of their facilities. He says:

"I have read Gen. James' pamphlet, and the pamphlets written by Mr. Gregg on the comparative advantages of the South for manufacturing; and yet, after all I have read on the subject, I may say, with the Queen of Sheba, half the truth has not been told. Cheap living, and, of course, low wages—cheap cotton, coal and iron, constitute the great elements of success in the introduction and prosecution of the cotton manufacture. No country in the world possesses these elements in a degree equal to the Southern and Southwestern sections of the United States. Great Britain, with her cheap coals and irons, stands at the head of all nations in point of wealth and commerce. She is now making a desperate effort to introduce cheap living, but she can never introduce cheap cotton. The Northern States can never equal the South in either of the above-named elements."

A gentleman of intelligence, from the manufacturing region of Pennsylvania, writes to the *Washington Chronicle*, of November 2, 1868, as follows:

"No finer agricultural lands can be found than exist in the States of Georgia and Alabama; and with their present large plantations cut into small farms, and the aid of free labor and the use of improved implements of agriculture, their products could be increased threefold. Take cotton alone, which in 1860 amounted in these two States to about one million bales of four hundred pounds each, the same proportion of increase could be produced in every other product adapted to that climate. The mineral wealth is almost incredible. Commencing in the north-western part of Georgia and running through Alabama to the Gulf, the deposits of iron and coal are found not merely in small beds, but in

mountains covering ranges of hundreds of miles. The iron ores are of the purest hematite, and are now worked with a facility far ahead of ores of the same character in Pennsylvania. Some of the furnaces we examined, which are built after the old fashion, are making, with cold blast and a single tweer pipe, from twelve to fifteen tons of charcoal iron per day, at a cost not exceeding fifteen dollars per ton. With such advantages, the South could, without the aid of tariff, control the iron business of the whole country. This no doubt may astonish and be received with incredulity by "iron men" of the North, but having had ocular proof of what we write, this statement is made advisedly. We are confident that the period is fast approaching when this simple prediction of her future will be more than realized.

"Before closing, we can not help referring to a single case in the town of Rome, which came under our notice, to prove what respectable free labor can accomplish. Thirteen years ago, James Noble, Sr., an old iron-master of Pennsylvania, emigrated to Georgia in search of his fortune, with a capital of twelve children, six boys and six girls. He went to work like a man, and by his example, taught his children the same, who are to-day ornaments to Southern society, and he and his good lady are respected and beloved by the whole community. Should his life be spared, he will be to that section of the country what Burd Patterson and Benjamin Haywood are to Pottsville, Pa."

The instances of Northern men who have made fortunes in the manufacturing regions of the South, and won the esteem and affection of the communities in which they labored, are not confined to single individuals. They are numerous all over the South, and are standing rebukes to the mistaken idea that the people of Alabama and of her sister States do not receive, with open arms, the men of honesty and enterprise, who seek their fortunes among us, let them come from whatever quarter, and with whatever opinions.

Of the value of the manufacturing facilities of Alabama, ex-Governor Patton, who has been largely interested in the cotton factories of North Alabama for many years, thus speaks:

"No State in the Union has more natural elements for successful manufactories than Alabama, and she has many that other States do not possess. She has inexhaustible water power, timber, coal, ores of iron and copper. She has the requisite transportation and distribution by rail and by water. She can spin and weave cotton on the ground where it is raised. The great change in the labor system, wrought by the results of the war, has taught that diversified industry is the source of greatest wealth.

"The popular belief that "Cotton is King," has been found by the war to be a delusion. Cotton, tobacco, and sugar, are great sources of wealth, but will not alone confer independence at home or abroad. Too much attention has been given to the *growing* of cotton.

"There is no reason why cotton and woolen cloths can not be manufactured as cheap, and cheaper, than in Massachusetts. There is scarcely a county in the State where magnificent water-power can not be purchased at almost nominal rates. The raw material, fine timber, etc., are in such close proximity that their transportation would cost comparatively nothing.

"Prior to the war there were in Alabama several manufacturing establishments, doing a large and profitable business. The counties of Madison, Lauderdale, Tuscaloosa, Bibb, Autauga, Coosa, and Tallapoosa, contained the most extensive and flourishing, but they were nearly all destroyed completely, during the war.

"The Bell Factory, near Huntsville, in Madison County, is in successful operation. This company manufacture a great variety of cloths, such as sheetings, shirtings, tickings, gingham, striped cottonades, etc.

"Specimens of the Bell Factory goods were forwarded to the Paris Exposition, and, in the report of the Committee, honorable mention is made of them.

"In Autauga county is the flourishing manufacturing village of Prattville, named for its worthy and enterprising founder, Mr. Daniel Pratt. Many years ago this gentleman commenced the manufacture of cotton gins. The place selected was then a wilderness, but its aspect is changed, and the indomitable energy of Mr. Pratt has converted this heretofore barren waste into a charming village and a miniature Lowell. Cotton mills and other manufactories are in operation, and the noble-hearted, public-spirited Daniel Pratt, has become enriched, and made for himself the name of a public benefactor.

"The Granite Factory, belonging to Messrs. Simpson and Moore, is located on Sockapatoy Creek, in Coosa county. The massive building in which the machinery is operated, is constructed of granite, from the immediate neighborhood. A beautiful article of cotton yarn is spun, and a superior article of heavy cotton cloth is wove, at these mills.

"This factory is far removed from any city or town, is in a healthy country, and the success of the enterprising proprietors is an illustration of the wisdom of locating factories with such surroundings.

"The operatives are mostly white, and, by their locality, not subject to the temptations incident to life in a city or town, they constitute a prosperous, happy, and contented community.

"This community offers a ready market for the surplus products of the small farmer in the vicinity, and adds greatly to the prosperity of Coosa.

"At Tallassee, on the Tallapoosa River, is the Tallassee Manufacturing Company (of which Messrs. Barnett & Micou are the proprietors), with their extensive mills. These are perhaps the most extensive manufactories of cotton and woolen goods in the State.

"Large quantities of various fabrics and textures are manufactured here, and meet with ready sale.

"The factory is admirably located, its water-power immense, and is surrounded with nearly all the necessary conveniences.

"There are other cotton factories in Alabama, but these are the most noted."

The specimens of the Bell Factory goods alluded to above, were exhibited at Paris, by Mr. Haines, who was sent to the Exposition as Special Commissioner of the State. At the same time he exhibited specimens of the minerals of Alabama, which attracted much attention, and led to minute inquiries, on the part of capitalists, as to her resources. Upon his return from Paris, Mr. Haines said, in his report:

"Improvised and incomplete as was the representation of our mineral resources at the Exposition, it has awakened an interest in the minds of European capitalists, the extent of which, few in Alabama have any conception. The day before I left Paris, I had a short interview with Mr. Hewitt, of New York. He had just returned from a tour of inspection among the iron establishments of England, where he distributed a number of our pamphlets, and he informed me that there now exists capital in England, disposed, and of sufficient amount, to purchase every foot of valuable iron and coal land in the State. I made it a point to mingle with English exhibitors and visitors extensively, and have lost no opportunity to describe to them the extent of our mineral wealth, or to enlist their assistance in disseminating among their people at home information respecting it; but I must confess, that I was unprepared to receive such encouraging intelligence as this. And yet it is not the English alone who have been attracted by our display.

"During my stay in Paris, I had frequent interviews, and was in correspondence with many prominent gentlemen interested in mining operations in France and Belgium, and received the highest encouragement, in the interest which they manifested, and can hope for much assistance in the co-operation of which they gave me the assurance. Until recently, the South has remained an undiscovered country, a *terra incognita* to the mass of the people in Europe. The events of the past

six years have drawn their attention to it, and they are now eager to learn something of its history and resources, its prospects and advantages."

In connection with a description of the manufacturing region of Alabama, it is proper to allude to the peculiar advantages which this region of the State enjoys over the North, for the establishment of profitable cotton factories.

COTTON FACTORIES IN ALABAMA.

Advantages over Northern—Case of the Augusta cotton factory—Remarkable profits—The Tallassee factory—Report of B. H. Micou—Advantages over England—Cost of raw cotton at an English mill—The same at an Alabama mill—Estimates of cost of a factory—Machinery—Profits of cotton factories at the North—Testimony of Senator Sprague, etc.

THE profits which may be made from the establishment of cotton factories upon the perennial streams of the manufacturing region of Alabama, may be readily understood, when we regard the vast wealth which has been added to the New England States by the hundreds of factories which have been fed in that distant region by the cotton of the South; and when we further consider that cotton goods of equal quality could be made at much less cost in the neighborhood where the raw material is grown, and where the cost of labor is so much less; and when we reflect that the water power of Alabama streams is never frozen, that the short winters require so much less fuel, that transportation and insurance, and charges of middlemen upon the raw material, is all saved, it is impossible to escape the conviction, that at no distant day every manufacturer will be compelled to transfer his labors to the immediate vicinity of the cotton fields. In the very able work of Hamilton Smith, Esq, of Louisville, Kentucky, it is demonstrated that locations for cotton factories upon the Ohio River, have an advantage over the Northern establishments of $21\frac{1}{2}$ per cent.

Of course, similar establishments in the immediate vicinity of the cotton fields must possess still greater advantages.

As an evidence of the profits to be derived from manufacturing cotton in the South, attention is called to the report of Mr. Wm. E. Jackson, President of the Augusta (Georgia) Cotton Manufacturing Company, showing the operations of the Augusta factory, for the year ending June 13, 1868. Mr. Jackson says:

"In presenting my twentieth semi-annual report, it is with pleasure I can state the condition of the Company is very favorable:

The gross earnings for the past six months have been.....	\$135,510 65
Interest received.....	3,921 65
	<hr/>
	\$139,432 30
From which is deducted expense account.....	\$ 8,731 64
Repairs account.....	3,575 11
Taxes paid.....	19,691 41
	<hr/>
	\$ 31,868 16
Leaving as net profits.....	<hr/>
	\$107,534 14

"From which two dividends of five per cent. each, amounting to \$60,000, have been paid, enabling us to carry to the credit of profit and loss account \$47,534 14, making the amount now to the credit of that account, \$224,298 22.

"Goods manufactured from december 14, 1867, to June 13, 1868:

	lbs.	Pieces.	Yds.
4-4.....	707,018	54,139	2,135,418
7-8.....	363,801	33,475	1,324,691
Drills.....	60,685	4,589	178,143
$\frac{3}{4}$	53,341	6,145	250,049
	<hr/>	<hr/>	<hr/>
	1,184,845	98,348	3,888,301

"Bale goods on hand December 14, 1867:

	7-8	4-4	Drills.	3-4	Total.
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	19	47	6	0	72
Made.....	1,574	2,567	254	294	4,689
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	1,593	2,614	260	294	4,761
Sold.....	1,558	2,561	253	270	4,642
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
On hand.....	35	53	7	24	119

	lbs.
Cotton consumed.....	1,362,571
Average cost of cotton.....	1,998,100
Average yards per loom, per day.....	49,103
Average number of looms running.....	505
Average number of hands employed.....	507
Aggregate wages paid.....	\$ 87,546 93
Aggregate sales.....	519,965 01

"From this date forward, you are aware, we are liable for water rent and city taxes. The water rent is fixed in perpetuity at \$3,402 per annum for the present number of our spindles; the amount for city taxes as yet unsettled.

"It would be a pleasure to give in detail, in pamphlet form, the operations of the company for the past ten years, but the extraordinary times of the late war would form no correct idea of what we might hope in the future, and there are so many things connected with that period which have heretofore been explained, and would require repetition, that upon the whole it might be desirable not to re-open the matter. Suffice it to say, our present condition is rather an enviable one; being entirely free from debt, sufficient commercial capital to conduct the business successfully in ordinary seasons, a good reputation for goods and responsibility, an excellent force of operatives, and the two mills in good condition.

"It may not be out of place to give here the operations of the company for the past three years, or since the close of the war—viz: From June, 1865, to 13th June, 1868:

Nominal balance 17th June, 1865.....	\$562,583 09
Amount paid creditors due them in Confederate notes.....	35,775 22
	<hr/>
	\$598,358 31
Deduct depreciation in Hamburg and Columbia Railroad stock.....	\$26,625 00
Deduct depreciation in various assets.....	466,284 05
Deduct suspense account, St. Louis,.....	4,703 71—
True balance, profit and loss account, 17th June, 1865, in United States currency.....	100,745 55
Gross earnings from 17th June, 1865, to 13th June, 1868...	932,906 57
Expense account.....	\$78,300 61
Repairs	33,386 72
Taxes.....	244,479 81
New machinery.....	92,686 76
Dividends paid.....	360,000 00—808,853 90
	<hr/>
Add to profit and loss account.....	124,052 67
	<hr/>
	\$224,798 22
Bales goods made.....	23,545
Aggregate sales.....	\$3,765,301 80
Aggregate wages paid	622,280 15
Average yards per loom per day.....	45,090, 100
Average number of hands employed.....	578

PRODUCTION FOR THREE YEARS.

	POUNDS.	PIECES.	YARDS.
4-4.....	3,726,014	292,540	11,337,660
7-8.....	2,120,137	200,154	7,711,451
Drills.....	362,173	28,275	1,065,759
3-4.....	53,341	6,145	250,049
	6,261,665	527,114	20,364,919

"It may not be uninteresting to some of our present stockholders to state what has been accomplished in the past ten years. It will be remembered by those who were among the original purchasers, that the property was purchased of the city for \$140,000, on ten years' credit, with interest at seven per cent. payable semi-annually, and one-tenth of the principal annually, the purchasers paying in as commercial capital \$60,000. This amount, in consequence of the dilapidated condition of the property, was almost entirely expended in the first two years, in repairs rendered necessary by the then condition of the property. We have, since the purchase, paid for the entire property without calling on the stockholders for another dollar; added largely to the property by purchase and building, bought about \$100,000 worth of new machinery, increased the capital to \$600,000, by the addition of a portion of the surplus; paid dividends regularly, and have now a property worth the par value (\$600,000 in gold)."

Here we find, in the city of Augusta, a factory which consumes three thousand bales of cotton, giving employment to 578 laborers; paying out wages, which are spent at the stores in the city, to the amount of \$622,280; paying two semi-annual dividends of five per cent., or *an annual dividend of twenty per cent.*; making a net profit of \$107,534 semi-annually, or of \$215,068 annually, upon an original investment of \$140,000; and, besides, paying twenty per cent. annual dividends, carrying to the credit of profit and loss the annual amount of \$95,068. In ten years, after deducting the losses of the war, the profits of the Confederate period having been lost by the subsequent depreciation of assets, we find that this establishment has not only paid for itself, but has increased its gold value from \$140,000 to \$600,000.

But we are not left to conjecture the value of manufacturing cotton in Alabama from the report of a factory in another State. In the winter of 1868-9, B. H. Micou, Esq., one of the Vice-Presidents of the National Cotton Manufacturers' Association, and President of the Tallassee Manufacturing Company, whose factory is situated upon the Tallapoosa River, a short distance above Montgomery, Alabama, pub-

lished an interesting report, containing interesting statements relative to manufacturing cotton in the South for export, and to manufacturing cotton at Tallassee, Alabama, into yarn for export to Europe. Mr. Micon says :

“ We have in the South some important advantages—viz : The healthfulness and even temperature of the climate ; the equality of time of our length of days through the year ; steady, cheap and abundant water power ; the raw material at hand ; a fertile soil, and a good supply of unskilled labor. Nature has been bountiful, and even lavish in her inducements. All that is wanted is proper energy and capital to command skilled labor, which, well directed, ensures success.

“ My own experience in various kinds of business and investment of capital seems to me to determine clearly to my own mind, that there is no business in the South for the investment of capital which promises so great benefit to the country, usefulness to society, or profit to investment, as manufacturing cotton ; especially to manufacture cotton direct from the plantation into yarn for export in place of exporting the raw cotton.

“ One-half the capital which was formerly invested in slaves for the culture of cotton, if invested in machinery and free labor, would have manufactured all the cotton that was made in the South, and more than doubled the value of that crop.

“ England is the greatest cotton manufacturing country in the world, and I propose to place before you comparative estimates showing very clearly that well-directed capital in our country can take the cotton from the plantations and spin it into yarn, and sell it in England for a greater profit than the English manufacturer can buy the cotton in Liverpool, and make it into yarn there.

“ The English manufacturer, it is true, owing to the abundance of skilled labor and capital, which has been created by fifty years of toil, can, and does afford, to work for a much smaller profit than we are accustomed to, or can afford.

“ But, when we come to count up the heavy charges of storage, government tax, insurance, commissions, transportation charges, interest and waste, which are added to the value of the raw material from the time it leaves the plantations until it reaches the English manufacturer's mill, these expenses alone are a princely profit, and can all, or nearly all, be saved by manufacturing the cotton where it is grown.

“ English machinery will run as well and produce as much work in Alabama as in England, and there is not so great a difference between the cost of labor in England and in Alabama as is generally supposed,

and my opinion is, that the cheapness of our water-power over England's steam-power will nearly, if not quite, balance the difference in cost of labor, and the only real advantages England possesses are her abundance of capital and skilled labor.

"These advantages, although very great, are more than balanced by the cheapness of the raw material in Alabama over England. And I proceed to demonstrate, by actual comparative estimates, based upon actual facts as they exist, what I have herein stated, and invite your careful examination and test of the same.

Estimated expense accruing on a pound raw cotton from time of its delivery in Montgomery, Alabama, to its delivery at the English cotton mill, Manchester, England.

Estimate in United States currency on a basis of fifty per cent. premium for gold, counting one penny as equal to two cents gold—no loss in weight counted—while the regular tare in Liverpool is four per cent, and usual loss in weight, including tare, is eight per cent.

First—Storage, insurance and commission in Montgomery.....	1 cent.
Second—Drayage, wharfage, freight and insurance to Mobile; wharfage, drayage, storage, insurance, classification, commission, and shipping in Mobile.....	2 "
Third—Internal revenue tax.....	3 "
Fourth—From Mobile, until sold to English spinners, the charges, as made up from estimates of actual shipments made, are for freight, primage, insurance in Liverpool, commissions and interest, cotton being sold in Liverpool on three months' credit; all these charges are made up from shipment, actually made, and amount to, per pound, two and three-eighths ($2\frac{3}{8}$) of one penny, equal in our currency to.....	$7\frac{1}{4}$ "
Expense per pound.....	$13\frac{1}{4}$ "

Estimate of the cost to the Alabama manufacturer to take one pound of raw cotton direct from plantation to cotton mill, and make the same into number thirty yarn, and shipment of yarn to Manchester and selling the same there :

First—Cost of labor, repairs, and other ordinary daily expenses of running cotton mill, as shown in a separate estimate from this, per pound.....	8.42 cents.
Second—Estimated expense baleing and delivery at railroad, per pound..	2 "
Third—Transportation to shipping port.....	1 "
Fourth—Freight and insurance to Liverpool.....	3 "
Fifth—Expense in Liverpool, including insurance and commissions for selling there, per pound.....	2.58 "
	<hr/> 17.00 "
Deduct drawback internal revenue tax.....	3 "
Total cost, manufacture, freight and sale per pound.....	<hr/> 14. "

Estimate, supposing one pound of raw cotton cost nothing in the interior of Alabama, it would cost the English manufacturer in United States currency, say—

First—The expense accruing to the shipper as per a former estimate, in Liverpool, would be, per pound.....	13½	cents.
Second—The ascertained cost of manufacturing one pound raw cotton into number thirty yarn, not counting the loss from waste of one-third, equals.....	9	"
	<hr/> 22½	"

Comparative estimates made up from foregoing estimates show,

That it costs to take one pound of raw cotton from the plantation in Alabama to Manchester, and spin the same into yarn, and prepare the same for sale in Manchester, per pound.....	22½	cents.
That it costs the Alabama manufacturer to take one pound of raw cotton from the plantation to mill, and spin the same into number thirty yarn, and send the yarn to Manchester, and sell the same there.....	14	"
Difference in favor of Alabama manufacturer.....	<hr/> 8½	"

When Middling Mobile is worth in Liverpool fourteen pence per pound, number thirty yarn warp made of mixed cotton is worth in Manchester nineteen and a half to twenty pence per pound; the cotton warp made in Alabama, being made of all American cotton, would surely be worth twenty pence per pound; equal in currency to sixty cents per pound; this would make the cotton cost and yield profit to the Alabama manufacturer as follows :

Cotton worth fourteen pence in Liverpool should cost the Alabama manufacturer at the mill.....	28½	cents.
Loss in manufacture ten per cent, say.....	3	
Cost in manufacturing and shipment and sale as per estimate, per pound.....	14	"
	<hr/> 45½	"
Cost of Alabama manufacture for one pound number thirty yarn.....	45½	"
Yarn sells for sixty cents; leaves for Alabama manufacturer, profit per pound.....	14½	"
By former estimates, the cost to English manufacturer of one pound of raw cotton at mill.....	42	"
Allow loss of seven per cent. for waste.....	3	"
Cost of manufacture and sale.....	9	"
Cost to English manufacturer for one pound of yarn.....	<hr/> 54	"
Profit to English manufacturer, net, by same estimate, per pound, is.....	6	"

Estimate for cost to run eighteen thousand one hundred and forty-four spindles, wages, clerk hire and repairs to produce in one month of twenty-six days, at eleven hours per day, sixty-nine thousand pounds number thirty yarn warp :

2 hands at opener, per month.....	\$20.....	\$40 00
1 " scutcher and laper.....	20.....	20 00
2 double scutchers and laper.....	26.....	52 00

1 grinder for rollers cleaners	52.....	52 00
8 " card tenders.....	16.....	128 00
2 " heads and drawing.....	16.....	32 00
3 " slubber tenders.....	20.....	60 00
6 intermediate frames tenders	24.....	144 00
16 " roving frames.....	26.....	416 00
24 " mule spinners.....	52.....	1,248 00
48 small boys, mule spinners.....	10.....	480 00
40 " reelers.....	16.....	640 00
4 " extra reelers.....	20.....	80 00
8 " sweepers.....	8.....	64 00
2 overseers, 1 carder, and 1 spinner.....	91.....	182 00
2 assistant overseers.....	52.....	104 00
4 bundling yarn.....	26.....	104 00
1 clerk.....	91.....	91 00
1 principal machinist.....	91.....	91 00
2 second "	78.....	156 00
2 third "	46.....	92 00
1 superintendent.....	.....	108 00
180 hands cost per month.....		\$4,381 00
100 gallons best sperm oil at \$3 per gallon.....		300 00
Other oil for machine shop, etc.....		100 00
Other furnishing and repairs.....		500 00
Allow 10 per cent. for expenses omitted.....		528 00
Expenses for one month.....		\$5,812 00
Cost of yarn per pound.....	8 42-100ths cents.	

Estimate of the cost of eighteen thousand one hundred and forty-four mule spindles, carding, and preparation machinery attached, suitable to spin number thirty yarn warp, to produce in sixty working hours, fourteen thousand five hundred pounds of yarn—equal for one month's work of twenty-six days, eleven hours per day, to sixty-nine thousand pounds of yarn.

This estimate was made up from actual offers from the best English machinists to make the same; the principal material used was fifty per cent. higher than it is now. I think it can be purchased for from fifteen to twenty per cent. less than estimate.

	£.	s.	d.
1 improved opener, all fixtures complete.....	106	0	0
1 single scutcher.	95	0	0
1 double scutcher.....	124	0	0
1 grinding machine for rollers and cleaners, complete.....	35	0	0
1 pair grinding rollers.....	10	0	0
36 single iron carding engines, with all fixtures complete.....	2,353	10	0
4 heads drawing frames, 6 heads each, eight rows of rollers, complete	486	0	0
4 slubbing frames, sixty spindles each, complete.....	396	0	0
6 intermediate frames, sixty spindles each, complete.....	786	12	0
16 roving frames, one hundred and twenty spindles each, complete.....	1,799	8	0

24 self-acting mule-spindle frames, seven hundred and fifty-six spindles each, all complete.....	4,388	8	0
40 hand cop-reels.....	140	0	0
1 ten-pound bundling press.....	20	0	0
Approximate cost of accessories, as bins, card, clothing, strapping, banding, etc.....	700	0	0
	<hr/>		
	£11,439	18	0
Cost of packing and delivery on ship-board, 10 per cent.....	1,143	2	0
	<hr/>		
	£12,583	0	0

Estimate cost of delivery at Mobile, duties and freight included—say custom house value one pound sterling at \$4 84, and estimating gold for currency at 50 per cent premium.

Estimate Cost in Currency.

Cost of machinery on ship-board is.....£	12,583
Measurement of machinery when packed, 400 tons, freight £1 per ton, is.....	400
	<hr/>
	£ 12,983
£12,983 reduced to currency is, in gold, \$4 84 to £1.....\$	62,837 72
Add fifty per cent., premium for currency.....	31,418 80
	<hr/>
	\$94,256 58

Estimate for Duty.

Amount of invoice cost, say.....£	11,400	00
Reduced to gold, is.....\$	55,176	00
35 per cent. duty on \$55,176 00 is, in gold.....	19,311	60
50 per cent. premium on amount of duty is, in currency....	9,655	80
	<hr/>	
Cost on wharf at Mobile.....\$	123,223	98

Estimate from Mobile to Tallassee.

400 tons, \$22 per ton.....\$	8,800	00
Estimate cost for shafting, hangers, pulleys, belting, and putting up the machinery and starting the same.....	17,976	02
	<hr/>	

Total cost of machinery in running order, in mill.....\$ 150,000 00

Estimate of amount of capital required to purchase 18,144 spindles and carding and preparation machinery complete, including all cost and spare capital to work on.

Estimate value of water power, mill building, water-wheel complete, lots and buildings for 200 operatives, say.....\$100 000 00

Estimate as per accompanying total cost of machinery in mill put up complete and in running order.....150,000 00

Estimate for cash capital to work on 50,000 00

Total capital requisite.....\$300,000 00

Of the \$150,000 00 new capital proposed for subscription, it would require to be paid in 15 per cent. when machinery is ordered to be made\$22,500 00

45 per cent. about 60 days after, when machinery is ready for shipment	\$67,500 00
40 per cent. to be paid about 60 days after, on arrival of machinery in	
Mobile.....	60,000 00
	<hr/>
	\$150,000 00
Present owners have already advanced, in water power, house and land,	100,000 00
On getting ready to work present stock, holders to pay the balance.....	50,000 00
	<hr/>
	\$300,000 00

According to accompanying estimates shows :

1st. That \$300,000 capital will purchase everything, and put in complete running order, leaving \$50,000 cash capital to work on—say machinery for 18,144 spindles, made to spin No. 30 yarn warp.

2d. One month's fair work for said machinery will produce 69,000 pounds of yarn.

3d. The profit on the yarn produced is 14c. per pound over all cost and charges.

4th. Twelve months' work, at that rate, will yield a net profit of \$115,920, equal to 38 60-100 per cent. per annum profit on capital proposed.

Mr. Micou says :

"In closing these estimates, I here state that they are not made by guess, but from actual data. Instance—cost of machinery from actual offers to make same; freight from estimates made in England of actual measurement, currency reduced according to existing value of gold ; water power, wheel, mill, building and operative houses, from what I believe would be a reasonable valuation, they being already built, and I knowing cost ; cost of manufacturing yarn by a number of hands, and actual wages to be paid ; and I have tried to make my estimates full, and rather over than under the right mark, it being my constant care not to deceive myself. Knowing so well how little reliance is to be placed on rough estimates, I have, in order to satisfy myself fully, gone into the minutest detail.

"For the examination of any American cotton spinner, using the best machinery, I annex an estimate of the cost of American machinery to produce the same amount of yarn as the foregoing estimate. Being aware that the American spindle will do more work to the spindle than the mule king spindle, I have allowed each spindle to do eighteen per cent. more work, and have, therefore, calculated for 15,360 spindles to do the same work as 18,154 English spindles. I would further state that the foregoing estimate is only an approximate one, not having in reach all the material wanted to make a correct estimate. The price of the

machinery, however, is the actual present price in Massachusetts, of the best makers. Any error in this estimate can be only in the amount of machinery required to do the work, too many or too few cards, pickers or reels, being estimated. I give it only as an approximate estimate, to show how much more expensive American machinery is than English machinery. I also estimate that it would take three times the number of hands to run the American machinery, and it would cost twice as much to do the same work.

6 36-inch 3-beater pickers, each \$1,150.....	\$6,900
To card double, which would be absolutely necessary in fine work of the top-flat card, it would take 120 56-inch cards, each \$250.....	30,000
120 railway troughs, each card \$15.....	1,800
6 railway heads, drawing each \$350.....	2,100
10 slubber frames (64-spindles each, makes 640 spindles), \$26 per spindle	16,640
15 fly frames (128 spindles each, makes 1,920 spindles), \$16 per spindle	30,720
120 ring spinning frames (128 spindles each, makes 15,360 spindles), \$6 per spindle.....	92,160
40 cop-reels, estimated to cost per reel \$200.....	8,000
Card and roller grinders.....	500
	<hr/>
	\$188,820
Estimate for card clothing, bobbins, and other furnishings.....	11,180
	<hr/>
	\$200,000
6 per cent. internal revenue tax, say.....	12,000
10 per cent. on cost for boxing and strapping, and placing on shipboard at Boston or Providence.....	21,000
Estimate owing to the greater bulk of cards and spinning work, measurement, 700 tons, at \$10 per ton	7,000
	<hr/>
Cost to wharf at Mobile.....	\$240,000
English machinery, estimated to cost at the wharf in Mobile.....	123,200
	<hr/>
Advantage in favor of English machinery.....	\$116,800

The Tallassee Factory is situated at the Falls of the Tallapoosa. It commands an unlimited water power. But, great as are its advantages, as set out by Mr. Micou from actual experience, they are no greater than those of hundreds of other localities in the heart of Alabama, and just as convenient to the cotton lands.

The profits of manufacturing, even in New England, are shown by the enormous dividends some of the New England manufacturers earned in 1867. The companies alluded to are mostly engaged in the production of cotton, woolen and worsted goods, upon a large scale, as will be

seen by the capital invested, which reaches a total of fifty millions of dollars :

COMPANIES.	PRICE.		DIVIDENDS.		
	Par.	Jan. 2, 1867.	1866.	Jan. 1867.	
<i>Manufacturing.</i>					
Androscoggin.....	100	200	25	20	20
Bates	100	145½	25	10	5
Chicopee	100	255	30	15	20
Coheco	650	710	\$40	\$50	\$50
Franklin	100	156	10	10	10
Great Falls.....	200	191½	5	3	3
Hamilton Woolen.....	100	300	7½	7½	12½
Hill Mill.....	100	205	10	20	20
Jackson.....	1000	975	15	5	5
Lancaster	400	645	20	25	10
Lowell Bleachery.....	200	245	5	5	10
Manchester Print.....	1000	1555	12	6	6
Massachusetts	1000	875	7	0	6
Middlesex	100	184	5-5-5		5
Nashua	500	695	25	10	40
Naumkeag.....	100	145	10	10	12
Pacific	1000	1995	14	12	12
Salisbury	100	260	5-10-7½		7½
Stark Mills.....	1000	1075	12	5	10
Washington	100	150	10	10	10

Most of these factories made two dividends per annum, some more, and the average shows a very handsome business of more than 40 per cent. profit, notwithstanding that both seasons were considered unfavorable to these manufacturing interests. The previous years for some time make a still better showing.

Senator Sprague, of Rhode Island, one of the largest manufacturers in New England, at a dinner given him by the citizens of Charleston, in December, 1868, said :

“It would surprise the people of the South, and still more the people of the North, to know, what is a fact, that the best cotton factory of its size and kind in America, is to be found in Augusta, Georgia, and that in looking at the subject in a manufacturer’s point of view, taking the productions per hand and per spindle, and comparing them with the work of other mills running on the same class of goods, he found that these Southern goods were equal to any of the kind seen in the Northern markets. Senator Sprague went on to say that “You,” meaning the Southern people, “can do what we,” meaning the people of New England, “can not do. With your great advantages you can compete with England for her Indian yarn trade. You ought to spin a large

part of your crop and ship it in that state, instead of shipping the raw material."

The *New York Times*, of January 16, 1869, remarks that the real estate operations of Senator Sprague, in the neighborhood of Columbia, coupled as they are with an alleged intention to establish manufactories there, may be expected to strengthen the upward tendency of Southern lands. "There can be no doubt," says the editor, "that the facilities for the prosecution of manufacturing industry presented by the South are vastly superior to those of any other portion of the Union, and it seems probable that they will soon be turned to account. Mr. Sprague is not the only Northern capitalist who comprehends the worth of the hitherto neglected resources of States which seem designed by nature to verify the combination of 'the plow, the loom, and the anvil.'"

THE MINERAL REGION OF ALABAMA.

Situation and extent—The Warrior coal fields—The Cahaba coal fields—The Tennessee coal fields—Railroad conveniences—Value of mineral land—Limestone—Marble—Granite—Gold—Copper—Peculiar value of the coal—Peculiar value of the iron, etc.

THIS section occupies the northeast corner of the State, and extends in a southwest direction about 160 miles into the State. On its eastern side, and in its middle part, it measures north and south 90 miles, and on its western side it is 70 miles wide, north and south.

The southeast corner of this mineral region is occupied by the rocks of the metamorphic formation. Gold and copper have been found in them; not, however, in abundance. White marble of remarkable brilliancy, some of it equal to Carara marble, occurs abundantly, and has been successfully worked. Soapstone, flagstones, graphite or plumbago, and granite of very good quality have, likewise, been obtained in this region.

The silurian and carboniferous formation possess the remainder of this mineral region.

There are three distinct coal fields in the carboniferous formation in Alabama—viz: the Warrior, Cahaba, and Tennessee fields.

The Warrior coal field covers that section of the State drained by the Black Warrior River and its tributaries, and also extends to the northeast corner of the State, between Lookout Mountain and the

Tennessee River. It has an area of 3,000 square miles. Its beds are horizontal, or nearly so, and are from one to four feet thick. The coal is bituminous, rather soft, but well adapted to the manufacture of gas and coke, and making steam.

The following is an analysis of the coal from the southern extremity of the Warrior coal field near Tuscaloosa, by Prof. Mallet, contained in the second report on the geology of Alabama, by Mr. Tuomey :

Volatile combustible matter.....	40.60
Fixed carbon.....	54.07
Ashes.....	1.09
Moisture.....	1.18
Sulphur.....	1.06
	<hr/>
	100.00

The Cahaba coal field, occupying the country drained by the Cahaba River and its tributaries, and extending thence in a northeast direction to the Coosa River, has an area of 700 square miles. Its beds are from one to eight feet thick, and are highly inclined. The coal is bituminous (harder, and therefore better adapted for transportation than the Warrior coal), and is excellent for generating steam and for the manufacture of gas, coke and iron. Although the area of the Cahaba coal field is comparatively small, yet the quantity of workable coal in it is immense.

The following is an analysis of this coal, also by Mr. Mallet, given in Mr. Tuomey's second geological report :

Volatile combustible matter.....	36.68
Fixed carbon.....	57.23
Ashes.....	5.30
Moisture	0.79
Sulphur.....	Trace.
	<hr/>
	100.00

The Tennessee coal field lies in the northeast corner of the State, north of the Tennessee River. The coal is also bituminous, and is extensively used in Chattanooga.

The total area in the State of Alabama of the three coal fields is 4,000 square miles.

In juxtaposition with these coal fields are extensive beds of excellent iron ore, and also of limestone and sandstone.

There are five immense beds of red and brown hematite iron ore near the coal fields, extending in a northeast and southwest direction for

many miles. During the war, some of these beds were worked, and produced iron pronounced superior to Swedes iron. The beds are of variable thickness, from one to thirty feet, and the ores contain from 36 to 58 per cent. of metallic iron.

There are also extensive beds of fire stone and fire clay, from which good fire brick can be manufactured. Flagging stones and excellent materials for making mill stones also abound.

The industry of making lime has been pursued with success in this section, on the Selma, Rome and Dalton Railroad, six miles northeast of Montevallo.

Materials for the manufacture of hydraulic lime, beds of clay for common pottery, and excellent porcelain clay, have been discovered.

The limestones of these formations furnish marble of great beauty and utility. Among these may be mentioned a light grayish blue rock, with spots of dark blue, black marble, yellow marble with black spots, gray marble, dove colored marble, and other variously colored marbles, affording durable and beautiful ornamental building material.

The valleys in this mineral region, east of the Coosa River, along and near the route of the Selma, Rome and Dalton Railroad, are fertile and well settled. They are well adapted to the production of cotton, corn, and wheat, and to the rearing of stock, and form a most beautiful and healthy farming and planting country.

Lookout Mountain, between the Coosa and Tennessee rivers, ascends abruptly to the height of about 450 feet above the valley, in a few miles from Big Wills Creek. Thence proceeding toward the Tennessee River for 18 miles, the top of the mountain is a comparatively level table land, covered with excellent pasturage. Arriving within a few miles of the Tennessee River, the mountain table-lands descend abruptly to the bottom lands of the river.

The mineral region is interspersed with numerous productive valleys.

The rivers Coosa and Warrior, traversing the mineral region, are not navigable, but could be rendered capable of navigation by locks and dams.

The Selma, Rome and Dalton Railroad passes about 120 miles through the mineral region (of which 105 miles are in operation in it), touching near the edge of the Cahaba coal fields, passing along the brown hematite ore beds, and near the extensive beds of white marble, to both of which materials allusion has been made. The Alabama and Chattanooga Railroad passes northeast and southwest for 130 miles through the mineral region, near to and between the Warrior and Cahaba coal measures,

and parallel with and in close proximity to extensive deposits of brown and red hematite iron ore.

The South and North Road will, when completed, run for 50 miles through the Warrior coal field, and will cross the Cahaba coal field for about 10 miles. It will also intersect three extensive deposits of brown and red hematite ore.

The cultivated lands east of the Coosa River, along the Selma, Rome and Dalton Railroad, forming, as before stated, a desirable, healthy farming and planting country, commanded high prices before the war. Well improved locations may be had there at from \$5 to \$6 per acre. The mineral lands may be procured at from 12½ cents to \$2 per acre.

Another highly important material, which abounds in localities convenient to transportation, is limestone, which produces lime equal to the Thomaston.

Beautifully variegated marble exists near the Cahawba River in Bibb county, and in Talladega county. Some of these marbles are buff colored, filled with organic remains. Some white and crystalline, and some black. The quarries are very extensive, particularly in Talladega county.

The quality of these marbles is very fine, and is said by good judges to equal the finest Italian.

In Coosa county there are several quarries of statuary granite of a superior quality, and is of a beautiful gray color, easy of access, being almost entirely above the surface of the ground, easily split, and is capable of being worked into any desirable shape or size.

Gold has been discovered in the counties of Randolph, Talladega, Coosa, Tallapoosa and Autauga. Several years ago, mining was carried on to a considerable extent at Arbacoochie, in Randolph, and at Goldsville, in Tallapoosa county, but of late years the mines have been neglected.

In Talladega and Clay counties (and perhaps in Randolph and Tallapoosa) copper is found. The Montgomery Mining and Manufacturing Company have developed rich copper mines in Talladega county. Beautiful specimens of sulphate of copper, brimstone, brown oxide of iron, phosphate of iron, sulphuric acid, saltpeter, and some other articles from these mines, were forwarded to the Paris Exposition, and can be seen at the Executive Department in Montgomery. These specimens were all extracted from a single Pyrites.

The Alabama coal is excellent for generating steam. Professor Tuomey, the former Geologist of the State, gives the following analysis of the Alabama coal, in comparison with the bituminous coal of Virginia:

Clover Hill, Va.—Carbon, 76.67; Volatile matter, 16.67; Ashes, 9.87; Hydrogen, 4.23.

Black Heath, Va.—Carbon, 80.28; Volatile matter, 10.27; Ashes, 9.26; Hydrogen, 4.08.

Powel's, Va.—Carbon, 86.84; Volatile matter, 8.76; Ashes, 4.60; Hydrogen, 4.80.

Alabama coal—Carbon, 80.96; Volatile matter, 12.96; Ashes, 6.08; Hydrogen, 5.18.

The value of coal for generating steam depends on the amount of carbon and hydrogen it contains. The preceding analysis shows that the Alabama coal possesses more of hydrogen than three, and more of carbon than two of the Virginia coals, considered the very best for steam purposes. By the following table, drawn by the celebrated Geologist, Sir Charles Lyell, and published in the Journal of the Geological Society of London, it will be seen that the Alabama coal, if not superior, is not inferior to the Maryland coal, noted as the best in the United States, by Professor Walter R. Johnson, in his report to the Navy Department :

NAMES OF COALS.	Carbon.	Volatile Matter.	Ashes.
Alabama Coal.....	80.96	12.96	6.08
Pennsylvania Coal.....	62.80	12.80	6.20
Maryland Coal, George Creek.....	70.76	16.03	13.22
do Frostburgh.....	74.38	15.13	10.34
Virginia Coal, Blackheath.....	58.79	22.57	8.64
Virginia Coal, Midlothian.....	53.33	33.25	14.14

The Alabama coal must therefore rank in the first class of fuel for producing steam. In fact, experiments have proved its superiority over all others, in an irrefragable manner.

The peculiar value of the Alabama iron ore consists in its adaptability for making steel, by the late cheap and scientific processes which tend to make steel as cheap as iron.

The process discovered by an Englishman named Bessemer, in 1856, of immediately converting cast iron into steel, while in the furnace, consisted in forcing air through the melted mass of iron by means of tubes opening beneath it. The iron became thus decarbonized and freed from silicon, and yet retained its liquid state, in consequence of the development of an intense temperature. Thus freed from silicon and carbon, the iron became steel, of greater or less quality, according to the degree of decarbonization arrived at. It was found, however, that the metal thus obtained was more or less unsound, breaking off and cracking when forged, and, that this difficulty was increased when the

iron operated upon, contained sulphur or phosphorus to any notable extent. Hence it became necessary, in order to perfect the process, to provide against the debasement of the metal which arose from its exposure in a melted state to the action of oxygen; and also, to find iron free from sulphur and phosphorus, in such quantity as to make the manufacture of steel as cheap as that of iron. This gave rise to the Mushet improvement upon the Bessemer process. Mr. Mushet hit upon the expedient of mixing a portion of iron containing the metal manganese with other iron and applying the Bessemer process to the furnace. The manganese, by its superior affinity for oxygen, deoxygenates the metal which is decarbonized by the current of air, and thus renders the metal sound, pure steel. By this simple application of manganese it was found possible to make steel as cheap as iron, saving two or three hundred per cent. upon the cost of that metal—provided iron could be found which was sufficiently free from sulphur and phosphorus. It was found that but two or three brands of English iron were adapted to the purpose. The double difficulty consisted in finding iron free from sulphur or phosphorus, and at the same time containing manganese.

Soon after the war, a series of experiments was tried at the Troy Works upon American iron, to test its adaptability to the Bessemer process, and the most beautiful specimens of steel were obtained from Alabama iron.

Subsequent experiments confirmed the fact that a peculiar excellence of the iron of Alabama consists in its freedom from sulphur and phosphorus, rendering it specially available in the production of steel by the Bessemer process.

It is now past refutation that steel can be made from Alabama ore as cheap as iron, and that manufacturers in this State can reduce the price of steel two hundred per cent. or more, and that no State in the Union can compete with Alabama in manufacturing steel by the pneumatic process. Mr. Mellen, President of the Cahaba Company, forwarded to the Paris Exposition a specimen of Alabama steel manufactured by the pneumatic process, which is pronounced superior to any yet obtained in America. In 1867, in a letter to the *Mobile Advertiser and Register*, Mr. Hagood, of the Shelby Iron Works, says that the iron of Shelby "has been tried for the Bessemer steel process, and pronounced by Messrs. Winslow, Griswold & Holly, who use the patent at Troy, New York, equal to the best iron they had tested."

The adaptability of Alabama iron to the process of being converted directly into steel, renders it peculiarly valuable for the manufacture of

rails. The people of Alabama, and especially the stockholders of incomplete lines, would save vast sums of money by manufacturing their rails at home. The amount which might be saved may be estimated when we reflect that we find iron ore all along the Selma & Rome Railroad in Bibb, Shelby, Talladega and Calhoun counties. These deposits are very rich, and they are well provided for by the Selma & Rome Railroad. The principal amount of iron ore in Alabama lies in the Red Mountain and its spurs, commencing at a point twenty-five miles east of Tuscaloosa, and running uninterruptedly in a northeast direction near Elyton and Ashville, to Gadsden, a distance of nearly one hundred miles, and in patches in Cherokee county, on to the Georgia line. The N. E. & S. W. Railroad is located along and near the Red Mountain, and will furnish the most convenient arrangement for developing the greatest iron interest of the State that could possibly be devised. Crossing as it does, says Mr. Milner, the proposed line of the South & North Railroad, near Elyton, which runs directly through both the Warrior and Cahaba coal fields, the necessary elements in the economical manufacture of iron, coal, and the rich ores from the Red Mountain can be as cheaply brought together as at any other place in the United States. From an estimate, made in 1857, by the agent appointed by the N. E. & S. W. Railroad Company, it was found that the cost of railroad iron manufactured in Jefferson county, Alabama, was at that time forty-three dollars per ton.

Professor Mather, State Geologist of Ohio, estimated, in 1857, the cost of manufacturing rails in that State as follows :

Pig at the rail mill, per ton.....	\$15 50
One-fifth loss in manufacture.....	3 10
Cost of making pig into railroad bars.....	22 00
Total cost of railroad bars, per ton	<u>\$40 60</u>

It sold in Pennsylvania, before the war, at from forty to fifty dollars per ton.

The following extract, from a statement of Hon. Mark A. Cooper, of Georgia, is of interest in this connection :

"The iron products of Pennsylvania are annually twenty-two millions of dollars.

"This employs a capital of five millions of dollars. It also gives employment and subsistence to five thousand workmen, and as many more women and children. The cotton crop of Georgia is estimated at twenty five millions of dollars.

"There are made in the United States, about eight hundred thousand tons of iron, which costs the consumers sixty millions of dollars. This much, and five hundred thousand tons more, of foreign iron, is consumed in the United States. A total of one million three hundred thousand tons consumed at a cost to the consumers of eighty-seven millions five hundred thousand. Of this, there is consumed in the Southern States one half—forty millions of dollars worth. They produce comparatively but little, suppose ten millions of dollars worth. This leaves thirty millions of dollars to be annually paid by the South for iron *made by others*. It is paid out of the cotton crop, directly or indirectly. The cotton crop is equal to one hundred and fifty millions of dollars. Of this, thirty million goes to pay for iron alone."

Every cent of this amount is just so much thrown away!

LOCALITIES OF ALABAMA WHERE IRON IS FOUND.

Red ore of Bibb county and Wills' Valley—The Red Mountains—St. Clair county—Limestone county—Cost of bloomeries—Shelby county—Calhoun county—Oxide of zinc—Jefferson county—Walker county—Analysis of specimens, etc.

FROM Tuomey's Geology of Alabama we abstract, for more convenient reference, the passages referring to the locations of iron and coal deposits within the State:

"The principal iron ores of the State have been examined, and numerous deposits added to those already known. The red or fossiliferous ore is now known to extend almost without interruption from a point two miles and a half below Pratt's Ferry, in Bibb county, to the upper end of Wills' Valley, DeKalb county; and on the east, in Cherokee, to the northern part of the county. On the west it runs up to Murphree's Valley. The thickness is variable, being in some localities twenty to thirty feet, and in others thinning down to one foot.

"Northeast of Greensboro', and on the northwest side of the Red Mountains, a bed occurs ten feet in thickness. Southeast of Elyton the ore continues for a distance of three miles. It caps the mountain, and is fifteen feet in thickness. About Trussville beds of brown hematite occur, not far from the red ore beds. On the spurs of Cedar Mountain red ore is found, with numerous joints of crinoidal stems—hence the name button rock applied to the ore.

"In St. Clair county, southwest of Springville, the ore occurs in a stratum fifteen feet thick, but varying in quality in different parts of the bed. At Pierson's Mill, in the same county, the ore is about seven feet thick. The ore is composed of large glazed grains; the composition is as follows:

(Composition in 100 parts):

Peroxide of iron.....	51.46
Silica	27.74
Carbonate of lime.....	19.89
Alumina.....	2.32
Oxide of manganese.....	.24
Phosphoric acid .....	.16
	<hr/>
	99.81

Metallic iron, 36.02 per cent.

"In Murphree's Valley the ore is found in a bed seven to eight feet in thickness. There is also a bed of brown hematite near this locality, one mile in length, composed of irregular masses.

"At Hanby's, on Turkey Creek, there is a bed of this ore, which is a continuation of the Murphree's Valley ore. It is about twenty feet in thickness, and as it occurs on the side of the mill-pond, it can be transported by water to the falls of the creek, where an admirable site for a furnace may be found.

"*Ore from Hanby's.*—The ore is oolitic, with shining surfaces on the recent fracture. It is stratified.

(Composition in 100 parts):

Peroxide of iron	61.87
Silica.....	37.58
Alumina.....	.26
Lime.....	.03
Oxide manganese.....	.05
Phosphoric acid.....	.03
	<hr/>
	99.82

Metallic iron, 43.31 per cent.

"Since this was written I have received a series of specimens from this locality, taken from an excavation in the bed. They show a great improvement in the ore, when compared with the specimen analyzed, which was taken from the surface. The results of their examination will appear in a future report.

"I have not attempted to enumerate all the localities where this ore is found in quantity; it so happens that it belongs to one of the most persistent formations in the State, one which extends from the north-

eastern boundary of the State to Pratt's Ferry, on the Cahawba, and it seems only necessary to describe those beds most likely to come first into use.

"The means of comparing this ore, both in quantity and composition, with similar ores from Pennsylvania and New York, will be found on page 31 of my first report.

"*Brown Hematites*.—In my first report I stated that it was probable that all the brown ores belonged to true beds, interstratified with the other rocks. A more extended observation has satisfied me that this is not the case with all the ores of this character in the State. The ores of Bluff Creek, North Alabama, and indeed all those in that part of the State, belong to the newer deposits, as may be seen from their admixture with the pebbles of the surface, and from their unconformable position. This fact is not so easily observed in the great iron deposits of Roup's Valley and Shelby, for here there are no pebbles, the ore being mixed with, and completely enveloped in a red loam; and what makes this the more puzzling, these deposits follow, in direction very nearly the strike of the rocks. In Roup's Valley, for example, the ore is found occupying a narrow belt, six to eight miles in length, having a course nearly northeast and southwest, almost co-incident with that of the underlying rocks. This is the case with the beds from which the bloomaries on Shoal Creek are supplied. The deposits on Shelby's Creek, as well as those in Talladega, are also disposed in a similar manner.

"*Brown Hematite, Bluff Creek, Limestone County*.—The ore is compact, with irregular cavities, and has a fibrous structure.

(Composition in 100 parts):

Peroxide of iron.....	80.65.
Sesquioxide of manganese.....	.26.
Alumina.....	.09.
Magnesia.....	Trace
Phosphoric acid.....	.92.
Water.....	12.37
Insoluble matter.....	5.58
	<hr/>
	99.87

Metallic iron, 56.45 per cent.

"It will be seen from this analysis, that the ore on Bluff Creek compares favorably with the ores of the State of the same variety. And there is only this difference, that it will require greater care in the selection, for reasons already pointed out.

"*Riddle's Bloomery*.—The ore used here is from Mr. Seay's bed, already described. Mr. Seay informed me that the cost of 3,000 lbs. of

ore delivered at the works was \$4 50. The distance was about six miles.

"The following account of the works, furnished to Mr. Lieber by Mr. Riddle, will show the cost of production at these works.

"The works of J. Riddle were commenced by J. M. Moore, Esq., in 1836. The Eagle Forge was erected by Messrs. Rersue and Williamson, in 1846, and is now owned by G. M. Riddle and Whiley Saunders. Rob Roy was built by John Moore and G. M. Riddle, in 1852, and is now offered for sale. A little forge, not now in operation, was built by Silas Garregus, near Chinebee, on Horse Creek.

"In these forges there are four stamps of 50 lbs. each. There are two furnaces at each forge, and in ordinary years the Talladega Creek will drive the blast for nine months. It requires fourteen to fifteen hands to attend to a forge. The working force is divided thus :

One (sometimes two) hammerman.	} Working at forge.
Two firemen	
One hand to stamp and roast ore.	
Four hands to chop wood.	
Three teamsters.	
Two colliers.	

"The cost of putting up such works, exclusive of dwelling houses, roads, etc., is from \$2,500 to \$3,000.

"The charge of the furnace is usually 5 lbs. of ore to 1 lb. of iron. The charcoal used is 700 bushels to the ton (of 2,000 lbs.) of bar iron. The weight of the loup of iron produced, varies from 100 to 135 lbs., and is made in three hours, so that four louns are the result of a full day's work. A loup of 125 lbs. yields 100 lbs. of bar iron. This is worth \$5 50 per 100 lbs., at the works. The pound of iron ought not to cost the manufacturers more than three cents.

"All the ore is now obtained from the Chinebee bed, at Seay's, 25 cents being paid for the privilege of hauling a load of 3,500 pounds of ore. For raising the ore and piling it at the bank, 25 cents are given, while the hauling amounts to \$1 per 1,000 pounds. The Chinebee bed has now been worked thirteen or fourteen years."

"Small, irregular pieces of iron are formed during the working of the loup, which are found troublesome. On being dissolved in sulphuric acid, they give a considerable amount of phosphorus and quartz, chemically combined. It is probable, therefore, that these are portions of the iron, rendered hard by such impurities.

"*Weir & Scott's Bloomeries.*—Shoal Creek, Shelby county, furnishes some fair sites, an abundant power for iron works of far greater extent than

those at present situated on it. The ore is found on the side of the ridge which runs parallel with the Montevallo road, and is raised at \$1 per ton. As the creek runs along the verge of the Cahaba coal field, it can not be a long time before the bloomeries will give place to high furnaces, where coke, instead of the more expensive charcoal, will be used as fuel.

To show the enormous waste in this the primitive mode of manufacturing iron, a portion of what appeared to be richest of the slag, but which was by no means a small part of the heap, was analyzed and gave 44.80 per cent. of iron. In the high furnace, it is evident that this slag will all be worked over with profit.

McClanahan's Furnace.—The beds at this place have been re-examined. The ore is inclosed in the manner just stated, in a bed of red loam, which extends toward the Coosa, two or three miles from the furnace. In the open pit, in which the fine fibrous variety is found, the fragments are angular, and the fractured surface quite sharp, being barely soiled by the loam. That they were fractured since their deposition is quite evident, and that they were not afterward transported is equally so; for there is not the slightest evidence of water-wearing, even on the sharpest angles of the fibrous fragments. The impression left by an examination of this locality, is that the whole was thoroughly shaken up, but not transported.

Fibrous Brown Hematite from McClanahan's Furnace; a part of the Bed not examined.—The specimen is from a bed near the furnace. It is of a structure distinctly fibrous and radiating:

(Composition in 100 parts.)

Peroxide of iron	82.82
Sesquioxide of manganese.....	.77
Lime	Trace
Alumina .....	.35
Silica.....	.29
Phosphoric acid.....	.15
Water	14.62
	<hr/>
	99.00

Metallic iron, 57.97 per cent.

Calhoun Iron Works.—Some difference seemed to exist between the ores from the two beds explored at this place; the upper one being preferred, while in the reduction of the ore from the lower bed, or one nearest the furnace, some difficulty seemed to exist. Specimens from both beds were examined, with a view of throwing some light on the matter.

1. Specimen from the upper bed, porous, and containing much yellow ochre in the cavities.

(Composition in 100 parts.)

Peroxide of iron	76.84
Sesquioxide of manganese.....	.37
Alumina.....	2.34
Magnesia.....	Trace
Phosphoric acid.....	1.08
Water.....	13.76
Insoluble matter.....	5.17
	<hr/>
	99.56

Metallic iron, 53.79 per cent.

The considerable amount of phosphorus in this ore no doubt gives it the property of producing the sharp castings for which the hollow ware of this establishment is noted.

2. A more compact variety than the preceding, with minute specs of ochre in the pores.

(Composition in 100 parts.)

Peroxide of iron	82.45
Sesquioxide of manganese.....	.63
Alumina.....	.77
Lime	Trace
Magnesia	Trace
osphoric acid.....	Trace
Water.....	12.70
Insoluble matter, with a little alumina.....	3.21
	<hr/>
	99.76

Metallic iron, 57.71 per cent.

The preceding are from the upper bed.

1. From the bed near the furnace. Partly compact, and composed of layers, with silicious particles derived from decomposed chert embedded in the mass.

(Composition in 100 parts.)

Peroxide of iron	68.13
Alumina.....	.46
Sesquioxide of manganese.....	.46
Phosphoric acid.....	.02
Water.....	10.89
Insoluble matter	20.02
	<hr/>
	99.98

Metallic iron, 47.69 per cent.

2d. From the same bed—more compact than the preceding, with iridescent tarnish on the surface, and having embedded particles of chert, in a chalky state.

(Composition in 100 parts.)

Peroxide of iron	73.64
Sesquioxide of manganese.....	2.57
Alumina.....	1.41
Copper.....	Trace
Phosphoric acid.....	Trace
Water.....	9.77
Insoluble matter.....	15.49
	<hr/>
	100.44

Metallic iron, 51.55 per cent.

It is difficult to point out any difference in the composition of the ores of these beds, that could interfere with their reduction, unless it be the greater amount of insoluble matter in the beds near the furnace. And this can be detected by the naked eye, for the fragments of silicious minerals embedded in the ore are often large, and such portions should be rejected. The greater richness of the upper beds will doubtless compensate for the additional expense of hauling.

As it is probable that these ores are derived from sulphurets, the trace of copper found here is not surprising, nor is it very uncommon in the brown ore of the State.

Oxide of Zinc.—Masses of this mineral, of several pounds weight, are, from time to time, taken from the crevices in the stack; as no traces of zinc have been discovered in the ore, it is almost certain that it had been introduced into the furnace with the limestone used as flux. Sulphuret of lead is known to exist in the limestone at this locality, and zinc blends, being associated with it, is conveyed to the furnace with the limestone in which it is found.

The mineral is of olive color, waxy lustre, and is disposed in concentric layers.

(Composition in 100 parts.)

Oxide of zinc.....	97.77
Protoxide of iron	1.21
Oxide of manganese.....	Trace
Silica.....	.64
Carbon .....	.06
	<hr/>
	99.70

The following is from Chambers county. It is found in deposits of

some extent, wherever hornblende rocks are undergoing disintegration. It resembles bog-ore, but contains scarcely iron enough to be admitted as an ore of that metal. It was looked upon with a great deal of interest during the period of the copper exploration, and for that reason it is introduced here. It seems to be made up of concretionary nodules, with shining points on the fresh fracture.

(Composition in 100 parts.)

Peroxide of iron	28.76
Sesquioxide of manganese.....	2.57
Alumina.....	1.12
Lime and Magnesia.....	Trace
Phosphoric acid.....	.08
Water.....	6.12
Insoluble matter.....	60.94
	<hr/> 99.59

Ores from the Coal Measures.—We need not expect to know much of these ores, till the Warrior coal field is explored to a much greater extent. No mining, worthy of the name, has yet been done, and as the ore occurs in the overlying shale, it is but rarely that it can be detected on the surface. There are, however, some promising localities in Jefferson and Walker counties, as will be seen from the following analyses:

Iron Ore from Jefferson County.—A compact, dark-colored ore, containing vegetable impressions.

(Composition in 100 parts):

Carbonate protoxide of iron	86.85
Carbonate protoxide of manganese	3.04
Carbonate of lime.....	2.12
Carbonate of magnesia.....	.12
Peroxide of iron .....	.43
Alumina.....	.06
Water.....	1.17
Carbonaceous matter.....	Trace
Insoluble ingredients.....	6.37
	<hr/> 100.16

Metallic iron, 42.23 per cent.

Specimen from Walker County.—Compact, bluish-gray on fresh fracture, yellow on the outside, and exfoliating in concentric layers.

(Composition in 100 parts):

Carbonate protoxide of iron	70.84
Carbonate protoxide of manganese	1.53
Carbonate of lime.....	2.31

Carbonate of magnesia.....	7.64
Peroxide of iron.....	1.20
Alumina.....	.13
Water.....	.84
Insoluble matter.....	14.94
	<hr/>
	99.43
Metallic iron, 35.04 per cent.	

IRON WORKS OF ALABAMA.

Their extent and location—The Irondale Works—The Red Mountain Works—Roupo Valley Works—Oxford Furnace—Shelby Works—Briarfield Works—Description of the latter—The adjoining country—Accessibility, etc.

THE following account of the Iron Works of Alabama, first published in the *Mobile Times*, in 1866, was contributed by a gentleman who had been prominent among the engineers of the United States Army :

“The number and extent of these Works is not generally known, even to our own citizens, and a brief notice of them may serve to show what has been done to develop the vast deposits of ore in the central part of the State.

1. Beginning at a point 50 miles north of Selma, east of the Cahaba River, and on the Alabama and Tennessee Railroad (now Selma, Rome and Dalton), we find, first, the Briarfield Iron Works.

2. The Shelby Iron Works, near Columbiana, and connected with the railroad by a branch road.

3. The Salt Creek Furnace, on the railroad, 15 miles beyond Talladega.

4. The Oxford Furnace, on the railroad, near the village of Oxford.

5. The Choccolocco Furnace.

“West of the Cahaba we find, first, the Roupo Valley Furnaces, 32 miles northeast of Tuscaloosa, on the line of the Northeast and Southwest Railroad, which is graded to that point.

2. The Red Mountain Iron Works, at Gracie’s Gap, near Elyton.

3. The Irondale Works, about 8 miles northeast from the last named.

“Nearly all these works were begun and carried on during the war, and were stimulated by assistance from the Confederate Government.

“The Irondale Works were begun in the second year of the war, by Mr. McIlwaine, who still directs them. The furnace erected then was burned by the Federal troops, after having produced a good deal of iron. After the close of the war, the property passed partly into the

hands of Northern capitalists, who have expended large sums of money in rebuilding the furnaces—in laying the foundations of a new furnace and of a rolling-mill of the largest class. A good deal of progress has been made, especially in erecting excellent machine shops, foundry and blacksmith shops. The ore here is red hematite, in inexhaustible quantities. Good bituminous coal is found within a few miles of the Works. The railroad from Montgomery to Decatur, Alabama, passes within eight miles of these works, and is to be reached by a branch road.

“The Red Mountain Iron Works, at Gracie’s Gap, were built up by the Messrs. Gilmer, of Montgomery, during the war. There were two furnaces of nine or ten feet bosh, one of which was in blast. The ore here is also red hematite, in vast deposits. There is an abundance of coal near by—on the line of the North and South Railroad, which is running from Lime Station, on the Alabama and Tennessee Railroad, to and across the Cahaba—say within ten miles of these Works. Nothing has been done here since the war.

“The Roupou Valley Works had two small furnaces, cold blast—one in operation. The ore here is brown hematite, and the supply is extraordinarily large. Coal is found within four miles of the furnaces. There is here a hill of ore (near McNath’s) a compact mass of hematite. The completion of the Northeast and Southwest Railroad will give every desired facility to this location. No effort has been made to rebuild these Works since the war.

“Passing to the east side of the Cahaba, the Oxford Furnace (hot blast), of about ten feet bosh, made very good soft iron from a bed of brown hematite. It has not been rebuilt, but offers good facilities for making charcoal iron.

“The Salt Creek Furnace is in the condition in which it was left at the close of the war.

“Further South, and near Columbiana, the Shelby Iron Works are still as they were left by the Federal troops. This is one of the best iron properties of the State. There is here one good furnace of ten and a half feet bosh, with hot blast, complete—the machinery, of course, destroyed. There is also an old furnace, of small capacity, which has not been used for a long time. There are also the remains of a rolling-mill, muck train, bar-mill, puddling and heating furnaces, all susceptible of being used again. The ore is brown hematite, of excellent quality, and the supply is large and easily mined. A branch railroad, six miles long, lined with wooden stringers and strap rail, leads to Columbiana, and belongs to this property. It is understood that the control of these works has lately passed into the hands of Northern capitalists, and that

the manufacture of pig iron, at least, is to be resumed there soon. Mr. Horace Ware, of Columbiana, began these Works before the war, and prosecuted them with success; but during the war sold them to the Shelby Iron Works Company.

"On the North and South Railroad, eighteen miles from Lime Station, on the Alabama and Tennessee Railroad, there is a small rolling-mill, built during the war by the Messrs. Hannon, Offutt & Co., suitable for making the smallest size bar iron. It has just begun work where it was burned by the Federal troops under Gen. Wilson.

"Further South are the Briarfield (formerly the Bibb county) Iron Works. These are the only iron works which have been rebuilt and put into operation, since the close of the war, except the short blast of the Irondale Furnace, and we propose to describe them more in detail.

"These works were begun by individual enterprise during the first year of the war, and after a cold blast furnace had been built and a rolling-mill partially completed, were sold to the Confederate Government for six hundred thousand dollars (\$600,000), at a time when Confederate money was but little depreciated. It was enlarged by the Confederate Government, by the addition of a hot blast furnace of eleven feet bosh, and by other valuable improvements, and was used for the manufacture of iron out of which its heavy rifle guns were cast at Selma, on account of the good quality of the pig iron produced there. These Works were destroyed by Gen. Wilson's troops early in 1865. In January, 1866, what was left of the Works was sold by the United States Government at public auction, and purchased by the Hon. Francis S. Lyon, of Marengo, for company, of which he and Col. James Crawford, Mr. Glover, Mr. Pront, and others, were members. The company commenced at once to rebuild the Works, under the superintendence of Gen. J. Gorgas.

"All of the structures are of the most substantial kind. First, within one hundred yards of the railroad is the large rolling-mill; within this there are three engines at work, one driving the "muck train," and intended also to drive the "nail plate train," a second which makes bar iron, and a third which pumps water, cuts off iron, and a machine for making buckles for cotton ties. Here are eight puddling furnaces, and two heating furnaces, and four boilers supplying steam to the engines. The boilers are placed by the heating furnace, and the steam is made by the waste heat from those furnaces. The machinery all appears to work well—is placed on stone foundation, and is well disposed for work. The puddling furnaces will convert sixteen gross tons of pig iron into muck bar in twenty-four hours, and these are to be daily converted into

twenty thousand pounds of bar iron, and one hundred kegs of cut nails—the machinery for which is all on the spot, though not yet put up.

“Passing from the rolling mill to the shops, we find a foundry with cupola crane, ladles, flasks, etc., fit for work of almost every character; a machine shop, with all the necessary machinery, driven by an engine of forty-horse power; a pattern shop, and small brass foundry; a blacksmith shop; and attached to the machine shop is the building intended for the nailery. Around these are clustered offices, storehouses, spacious stables, and about thirty good frame dwellings, plastered and white-washed, and looking very cheerful. A neat school-house serves also as a church, and for a Sunday-school of about seventy scholars.

“In full operation, these Works would give employment to some three hundred operatives. On the opposite side of the railroad from the shops, and about one hundred yards distant, is a lime-kiln, with train road leading to a stone quarry distant about three hundred yards. The kiln is of the kind known as “perpetual”—that is, the burning and drawing go on continuously.

“Taking the train road, which is substantially laid with iron, and going westward two and three-quarter miles, passing by the sawmill of the Company half way out, where there are beautiful springs, and several dwellings, we came to the “Strother (late Bibb county) Furnaces,” called after Hon. Francis “Strother” Lyons, well-known and beloved throughout the State of Alabama.

“Here, in a pretty valley, amid heaps of black cinders, stand two brick furnaces. The hot blast furnace looms up with draft, stock, hot blast, engine-house, casting-house, and other appurtenances. Going into the engine-house, up a flight of steps, you see a pair of large, short cylinders, called “blast cylinders,” driven by a strong engine.

“These cylinders serve as the bellows to a fire, and supply the blast by which the ore is smelted in the furnace. Another flight of steps upward lead to the “bridge house” at the top of the furnace. Here the ore, limestone and charcoal are weighed and measured, and fed into the top of the furnace. The engine goes on puffing ceaselessly, day and night, and the feeding of the furnace at the top never ceases. Twice in twenty-four hours the furnace is tapped at the bottom, and the iron runs out into a sand bed in shapes called “pigs,” weighing about one hundred pounds each. The furnace is fed daily with forty tons of ore, nine or ten tons of limestone, broken up small, and twenty-five hundred bushels of charcoal, or, if coke be used, twenty-five or thirty tons of that, making the large aggregate of about seventy-five tons of material fed in daily. This would be the limit of the capacity of the furnace

and would make some twenty-two tons of iron daily, as the yield is something over fifty per cent. of the ore used. The hot gases, as they escape from the top of the furnace, are drawn off on one side under the boilers to make steam, and on the other side into the 'hot blast,' where the cold air, driven in by the cylinders, is heated to a temperature of about six hundred degrees, or to the melting point of lead. Alongside of this furnace stands the cold blast furnace, which has not been in blast since the close of the war. The hot blast is forty feet high, eleven feet four inches in bosh (greatest diameter), while the cold blast is thirty-six feet high, and ten feet and six inches in bosh.

"In the rear of the top of the furnace, and side by side, are four brick structures, which look like big ovens. These are for preparing charcoal. Into each of them fifty cords of wood are charged, and produce nearly three thousand bushels of charcoal. A cord of wood thus produces sixty bushels of coal, while in the ordinary way of burning it in pits, yields only thirty to thirty-five bushels.

"Around these furnaces are collected the offices, stables, shops and tenements of the company, straggling up and down in picturesque irregularity. The company has here a body of nearly seven thousand acres of land, on which there is excellent timber, and the ore spreads over five or six hundred acres in sufficient quantities to supply the furnaces for many a year to come. The ore is brown hematite, as at Shelby, and produces an iron of great strength.

"Bituminous coal of excellent quality is found in thick veins, within three and a half miles of the furnaces, and has been opened out and used to some extent. A branch railroad from Ashby Station, one and a half miles distant, on the Alabama and Tennessee River Railroad, is graded directly by the furnaces, and up to the coal fields. No work has been done upon it since the close of the war. There is little doubt but that when this branch road is opened into the coal fields (and Capt. Barney, agent of the lessee of the Alabama and Tennessee Railroad, has expressed his intention of completing this important feeder of his road without delay), it will penetrate the finest coal beds in the State.

"The veins here attain the thickness of seven feet, at a distance of eight miles from the junction, and Mr. Rainey, of New Orleans, has opened a vein of five feet thickness, within three and a half miles of the 'Strother Furnaces.'

"The country about Briarfield is picturesque and salubrious; the valleys of the streams fertile, affording abundant good lands to support the mining and manufacturing population, which will collect here at some future day. Bold springs and clear, beautiful streams diversify

the face of the country. The population is chiefly white, and supplies good material for carrying on the necessary work, though it will be materially reinforced by immigration, as soon as calls are made for additional labor to develop the abundant beds of iron and coal.

This region of country is also very accessible. The Selma, Rome and Dalton Railroad (lately called the Alabama and Tennessee Railroad), running directly by Briarfield, is open (daily trains), from Selma to Blue Mountain, one hundred and thirty-five miles, and is now to be completed to Rome and Dalton without delay. At Lime Station, 68 miles from Selma, and 13 from Briarfield, this road is crossed by the North and South Railroad, leading from Montgomery to Decatur—of which about 20 miles from Lime Station are completed and in use. This road penetrates the Cahaba coal fields and the rich deposits of real hematite of the Red Mountain lying east of and near to Elyton. Two miles below Montevallo, and three miles above the Briarfield Iron Works, a branch road, two miles long, leads to the coal fields—where are the Montevallo, the Shelby, the Mobile, and the Selma mines. The last are in good working order, and have a good deal of coal out. The Montevallo mines are worked by a company, now known as the Central Mining and Manufacturing Company, composed chiefly of residents of Montgomery, of which Major C. G. Wagner is president. At Ashley Station, forty-nine miles above Selma, and two miles below Briarfield, a branch road is graded out four miles, intended to reach the rich veins of coal lying between the Cahaba and the Little Cahaba Rivers. Here are thousands of tons of coal already mined, waiting for the means to take it to market. Six miles of additional grading will reach the Cahaba, and one and one-half miles more will reach coal veins, five feet thick, already opened. Some of these veins make excellent coke, of which a good deal has been used in the cupola at the Briarfield Foundry.

LOCALITIES OF ALABAMA WHERE COAL IS FOUND.

Warrior coal field—Sipsey Fork of the Warrior—Locust Fork—Cahaba coal fields—Coosa coal field—Thickness of the beds—Depth from the surface, etc.

Warrior Coal field.—McGee's—E. half of S. W. fourth of S. 12, T. 20, R. 10 W. This bed is from 9 inches to one foot thick; is very extensive, and excellent coal.

S. of the mouth of Binian's Creek, and distant from it 150 yards—near Mr. Pruett's (a little N. of last named locality), coal is found, 30 or 40 feet above the bed of the creek. It is situated in the side of a hill of deep yellow slaty clay.

Two miles S. W. of D. Smith's, on Winter's Mill Creek, is a bed of excellent coal, about 12 inches thick.

At Mr. John Williams'—S. 12, T. 17, R. 12 W., coal was found in a well, 28 inches thick. Mr. Williams says, that half-a-mile W. of his house, the coal is 3 feet thick. Coal is here very abundant. It is found in three Sections.

At Boxe's Creek, in S. 10, T. 16, R. 12 W., Mr. Moore says that there is a coal-bed two miles N. E. of his house, from which smiths in Fayetteville haul coal. Mr. Pryor says that there is another bed half-a-mile S. E. from his mill, but that the nearest coal that he knows of N. of his mill is about 4 miles up New River, near Adley Harris', and on the E. side of the river.

Near Mr. McCollum's, S. 18, T. 14, R. 11 W., a bed of good coal, 1 foot thick, has been found, situated 30 or 35 feet above the bed of Mill Creek. Mr. McCollum says that there is another bed of coal, in the bed of New River, three-quarters of a mile S. E. of his house. It has been worked two feet deep, but the bottom has not been reached.

Mr. G. Brown's, S. 27, T. 13, R. 11 W., three-quarters of a mile S. of the fork of New River. The coal at this place is 2 feet thick, but is said to contain a great quantity of sulphur. There are several beds upon Mr. Brown's land.

Mr. Stephen Vaughan's, S. 23, T. 12, R. 12 W. Here is a bed of hard coal, which has been excavated 3 feet deep, but the bottom of the coal has not yet been reached. The bed is nearly level. Coal is hauled from this place, 15 miles N. W., to Pikeville, and 8 miles S. W. to different smiths.

Lemuel Burnet's, on the W. fork of New River. Here extensive beds of coal are found, but, as usual, none of them have been worked to the bottom. The coal-heavers generally raise coal from two or three feet deep; and, as the beds are in the bottoms and sides of creeks, the water hinders them from going deeper. All the coal on this side of the coal field is very hard. The smiths say it is good coal. Mr. Burnet says that a Mr. Loden has discovered a coal-bed some 10 miles W. of this, said to be of good quality.

On Buttahatchee Creek, near where the road to Russellville crosses, a bed of coal, 1 foot thick, was discovered in the bank of the creek.

Seven miles S. E. of Mr. Northington's, S. 34, T. 9, R. 15 W., numerous small seams of coal on a fork of Buttahatchee Creek.

At New London, S. 22, T. 9, R. 10 W., information was obtained of a coal-bed, three or four feet thick, on Big Bear Creek.

Sipsey Fork of the Warrior.—At Old Baltimore (eastern part of Winston county), there is a bed in the river, said to be thick. About 50 feet above the river a thin seam of 2 or 3 inches; and another, 3 miles N. W., near the top of the highest hills in that direction, in some places 2 feet thick, and of good quality.

Two miles from the mouth of Rock Creek (near the last named locality), is found a very extensive bed of coal, running up the creek several miles; where measured, the bed was 2 feet thick. 100 feet above the bed of the creek, there is another seam, 6 inches thick, of good quality; and S. of the creek, another seam, in the hills, of 8 inches.

In the bed of the Brushy Fork of Sipsey Fork, there is said to be coal of some thickness.

Near the mouth of Roberts' Creek, emptying into Sipsey Fork, there is a coal bed 7 or 8 inches in thickness, 50 feet above the bed of the river.

At old Warrior Town (junction of Sipsey and Mulberry forks), a bed occurs, a little over 2 feet in thickness, 50 feet above the river—extends several miles up Sipsey Fork, and at least a mile down stream.

Mr. James Hanby (whose mill is 5 or 6 miles up the Mulberry Fork, from its junction with Sipsey Fork), says that he gets his coal 4 miles S. W. of his mill, near the Oakey Hollow road—that the bed is in the top of a hill, and 4 feet thick.

Locust Fork of the Warrior.—At the mouth of Slab Creek, coal shows for over a mile up that stream, about 18 inches thick. From the mouth of the creek, down the river, the coal continues 4 or 5 miles, showing occasionally. It was said by some persons that a bed of 4 feet had been found in this region; none measured by Mr. Powell would average over 18 inches. Up the river from Slab Creek, the coal is said to extend half-a-mile.

From the junction of the Locust Fork and Little Warrior, up the latter stream, several thin beds are found; one is about a foot thick, but not good. Some thin seams have also been found on the left of the two forks, which unite just above where the Huntsville road crosses the stream.

The basin of the Little Warrior is well supplied with coal, particularly the part lying next to Murphree's Valley, where three beds occur in pretty regular succession, one above another, varying from 2 to 4 feet in thickness.

On Five-mile Creek, S. 33, T. 16, R. 3 W., coal was found, 50 feet above the bed of the creek. Another bed, in S. 4, T. 17, R. 3 W., is nearly 3 feet thick, and horizontal; it may be seen for 200 yards.

N. E. $\frac{1}{4}$ of S. 25, T. 16, R. 4 W., another bed of coal, about 1 foot thick, 104 feet above the great bed in the creek.

At Mr. Lynn's, where the Jasper road crosses Five-mile Creek, coal nearly 4 feet thick was found, 150 feet above the bed of the creek. Another seam, of 1 foot, 30 feet above the former.

A bed of coal, 4 feet thick, is said to have been discovered as far north as Lick Creek, a fork of Flint Creek, in Morgan county.

Cahawba Coal Field.—Near Mr. Truss', S. 25, T. 16, R. 1 W., the coal beds are said to be numerous, but not very thick, and the coal not good for smith's use.

Near the top of a hill, S. of the Cahawba River, S. E. of Mr. Truss', coal was found, 40 or 50 feet above the bed of the river.

In S. 26, T. 16, R. 1 E., is a coal bed from which a great quantity of excellent coal has been obtained. It has been proved to be 3 to 4 feet thick.

A quarter of a mile N. of the house of Mr. Thomas Atkins (near the last named locality), there occurs a bed, said to lie nearly vertical, and to be $4\frac{1}{2}$ feet thick—apparently good coal. Some beds, within a mile and a half from this place, are said to be 8 feet thick. Coal is abundant on the N. side of the Cahawba Valley, almost to its northeastern extremity.

Near the forks of the Cahawba, S. 23, T. 18, R. 2 W., on a branch called Coal Creek, a regular bed of coal is seen, lying nearly horizontal for several hundred yards, in the banks of the creek; then 3 or 4 beds appear to join it at right angles. The examination of this locality was unavoidably left incomplete.

At the head of Black Creek there is a bed, said to be 4 feet in thickness. The N. E. limit of coal here appears to be in S. 16, T. 15, R. 2 E.

Coosa Coal Field.—Broken Arrow Creek, on the road leading from Ashville to Robinson's Ferry, a bed of coal was found, which had been excavated to the depth of 3 feet, without reaching the bottom. It is of good quality. Three or four coal-pits are worked in this region, within a few miles. A Mr. Sims has a bed 3 to 6 feet thick; and Mr. Warren a bed of 4 feet: S. 1, T. 16, R. 3 E.

S. 27, T. 16, R. 3 E., a bed is said to occur, 2 feet thick, and of good quality.

Mr. Barber, S. 17, T. 15, R. 4 E., has a bed of excellent coal, nearly horizontal, known to be over three feet through.

Wm. Coleman, S. 21, T. 15, R. 4 E., has a bed from which large quantities of coal have been hauled to the Coosa River.

Mr. Boxe's, on Trout Creek, S. 7, T. 15, R. 5 E. The thickness of the beds on this creek is generally 3 feet—coal good—situated only 3 miles from the Coosa River.

COAL AND IRON OF THE RED MOUNTAIN COUNTRY OF ALABAMA.

Red Mountain Iron and Coal Company—Pamphlet of Col. D. S. Troy—Quality and extent of the beds—Topography—Cahaba River navigation—Railroad conveniences—Productiveness of soil—Climate—Adaptability to white labor.

AN interesting pamphlet has been recently prepared by Col. D. S. Troy, of Montgomery, Alabama, law-partner of Ex-Governor Watts, and a gentleman of high position at our bar, in which the writer advertises for sale the mineral lands of the company which he represents. Although the pamphlet is published as an advertisement, we could not furnish our readers with better information than it contains. Especially is this information of importance at the present time, because of the interest which attaches to the two great railroads of the State, the South and North, and the Alabama and Chattanooga, which must intersect in the region described by Colonel Troy.

The mineral lands of the Red Mountain Iron and Coal Company, lie in Shelby and Jefferson counties, in the State of Alabama, from three to fifteen miles south of Elyton, the county town of Jefferson county.

Shade's Mountain, Red Mountain, and several smaller elevations, with a general direction parallel to the Cahaba River, and lying on each side of it, were formed by volcanic action, which lifted up the stratified crust of the earth from the southeast toward the northwest. The strata dip to the southeast, at an angle of about thirty-five degrees; and the ascent of the hills from that side is very gradual, being generally less than the dip of the strata, from the accumulation of soil in the valleys and on the slopes. On the northwestern side the strata is broken and the ascent is generally precipitous, rising in some places to several hundred feet above the valleys. These valleys are generally level, and all the ranges are frequently intersected by gaps, through which roads,

either turnpike or rail, can be made with much less difficulty than is usually met with in broken countries.

The coal is bituminous and varies in quality, and in different localities. On the lands of this Company, over which the South and North Railroad is now running, near where Buck Creek empties into the Cahaba River, seventeen veins have been discovered, eight of which are from two to four feet thick, out-cropping on and underlying the Company's lands for miles. I am not aware that any of the veins in these coal-fields have been worked beyond a few hundred feet; the system of mining being, to begin at the out-crop and follow the vein; but as far as they have been worked the coal improves in quality, and in some instances in quantity also. No one, as yet, seems able to conjecture the extent of the deposits. Some of the veins have been worked to a limited extent on the lands of this Company, and coal in considerable quantities is now being mined from the same veins at the Cahaba Coal Mines on adjoining lands. This coal is shipped by the South and North Railroad to Limekiln, on the Selma, Rome and Dalton Railroad, and thence to Selma, Mobile, Montgomery, and other points. It is well adapted to smelting iron, and it is no exaggeration to say that the supply owned by this Company is inexhaustible.

A few miles to the north of the coal fields is the iron stratum of Red Mountain; this stratum out-crops on the southwestern slope of the mountain one or two hundred feet only above the level of the valley. It is a solid stratum of iron ore, about thirty feet thick, composed of a number of substrata, which yield from twenty-five to sixty per cent. of iron; some of the substrata, many feet thick and apparently unlimited in extent, have been found by actual working to yield regularly over fifty per cent. of pig iron.

The ore is red hematite, and the iron made from it, is pronounced by competent judges to be equal to any made from ore of that description in any part of the world. The ore is quite soft and remarkably free from dampness and earthy matter. No mining skill is required to get it out, and it is not necessary to dry or cleanse it for the furnace. A common laborer with no instruments except a pick and a crowbar, can get out a ton of it ready for the crusher in a few hours. This stratum of ore out-crops on the lands of this Company. It dips to the southwest at an angle of about thirty-five degrees, and underlies several square miles of the Company's land.

A heavy stratum of limestone, containing nearly all qualities of limestone from marble downward, underlies the stratum of iron ore, and out-crops a few hundred feet higher up Red Mountain, in many places.

forming, with the stratum of iron ore, the top of the hill and a large part of its northwestern face. It is quarried on the surface, and many of the substrata, unlimited in quantity, have been found by experienced iron-mongers to be of the very finest quality for iron-making.

The valley between Shade's Mountain and Red Mountain is only from two to three miles wide, the former lying to the southeast of the latter. The northwest face of Shade's Mountain, fronting this valley, is formed of stratified sandstone several hundred feet thick, the substrata ranging from a few inches to several feet in thickness. It can be quarried with great facility, the strata being so uniform that in many places the blocks taken from the quarry require no top or bottom dressing to fit them for building purposes. It is admirably adapted for building of any description, some of it being beautifully variegated, and it is pronounced, by those who are acquainted with such matters, to be the best material in the world for building furnaces.

By the act of the Legislature of Alabama, incorporating this Company, the State granted to it the exclusive right to create slack water navigation on the Cahaba River in the counties of Shelby and Jefferson, and to use the water power thus created.

This is an unconditional grant of the entire water power of the Cahaba River from its source to the mouth of Shade's Creek, with ample authority to make it available. The river is well confined within its banks and can be readily controlled, and gentlemen who profess to understand the subject place a high value on this franchise.

Shade's Creek, on the iron lands, and Buck Creek, on the coal lands two fine, never-failing streams, and many beautiful springs, furnish abundant water for ordinary purposes.

The Nashville and Decatur Railroad passes centrally through the principal tracts of both coal and iron lands belonging to this Company. This railroad is designed to run from Nashville, Tennessee, to Limekiln on the Selma, Rome and Dalton Railroad. It is completed and operating from Nashville south of Decatur, Alabama, on the Tennessee River, a distance of twenty miles—with a branch across the coal lands of this Company. Much of the grading to Elyton, fifteen miles beyond, has been done.

The South and North Alabama Railroad from Montgomery to Limekiln is intended as a part of the same line, and the two corporations will doubtless soon be consolidated into the Nashville and Montgomery Railroad. Most of the grading has been done from Montgomery to Limekiln. The city of Montgomery has recently subscribed five hundred thousand dollars to these roads. The State of Alabama has agreed

to indorse the bonds of the Company at the rate of sixteen thousand dollars per mile. The enterprise has the benefit of the three per cent. fund of Alabama, amounting now to a bonus of over eight hundred thousand dollars, besides a grant of alternate sections of land from Congress, some of which are as rich in coal and iron as those I have described. The work already done on the road and the property purchased and held by it have been recently valued by disinterested engineers at nine hundred thousand dollars, and the stock of that company has been reduced to that sum. Its liabilities do not exceed fifty thousand dollars, and there can be no doubt that the road will be speedily completed. With one terminus at Nashville, Tennessee, in the heart of the grain and stock-raising portion of the country, and the other at Montgomery, Alabama, in the lap of the cotton-growing region of the South, resting in its center on the richest beds of coal and iron in the world, it must of necessity be one of the best paying roads in the South.

The Montgomery and Eufaula Railroad, intended to connect with roads in Georgia, and forming with them the shortest practicable route from the coal and iron fields of Alabama to the Atlantic, at Brunswick, Georgia, is also in progress, and will probably be completed in time to meet the wants created by the development of the coal and iron deposits of Central Alabama.

The Wills' Valley Railroad and the Northeast and Southwest Alabama Railroad form a continuous line to Meridian, Mississippi. These companies have very recently been consolidated into the Alabama and Chattanooga Railroad Company, of which Governor Patton is President. Messrs. J. C. Stanton, J. T. Burr, and other capitalists of Boston, Massachusetts, have purchased the entire line, and, with ample means for the purpose, have agreed to complete it as fast as money and energy can accomplish the result. The route of this road, as originally projected, passes through Jones' Valley and crosses the Nashville and Decatur Railroad near Elyton, but the route through Shade's Valley will doubtless be selected. It is said by competent engineers to be shorter and less expensive, and by this route the railroad will pass for miles only a short distance from the out-crop of the Red Mountain iron ore, and immediately by the furnaces already erected and to be erected in Shade's Valley; any one of these furnaces will furnish more business to the railroad than the whole of Jones' Valley. The two routes are at no point distant from each other more than a few miles, but the Red Mountain, and its iron ore, as well as the facilities for its manufacture, are in Shade's Valley. This necessitates the building of a railroad

along Shade's Valley, and it will be done, even if the Alabama and Chattanooga Railroad Company, in the face of their obvious interest, should select the other route.

The Northeast and Southwest Railroad (hereafter to be known as the Alabama and Chattanooga Railroad), if constructed through Shade's Valley, will cross the Nashville and Decatur Railroad at a place which we have named "Ox Moor," near the center of a tract of land containing more than three square miles belonging to this Company. It is a beautiful location for a town, well watered, and convenient to building material of every description. Here, at this crossing, it is expected that the "Atlanta" of regenerated Alabama will spring up, and some very sanguine persons already look upon it as the future capital of the State. These great expectations of a city as yet uninhabited may never be realized, but a town of some importance at this point must necessarily result from the building of the railroads above mentioned.

The soil is productive and the beautiful hills and valleys of Central Alabama can well sustain a teeming population, but it is now sparsely inhabited. The capitalist investing in this part of Alabama would be in no danger of trouble from any possible conflict of races, nor of having his imported labor affected in any way by the existing population.

The climate is healthy and well adapted to white labor. Mr. W. S. McIlwaine, who is now running a furnace and foundry at Irondale, informed Colonel Troy, that he had found, by actual experiment, that a white laborer in Central Alabama could do more work in twelve months than he could do in the same time in Pennsylvania. It is never excessively cold in winter, and in summer, the nights being longer than in higher latitudes, the air becomes cool and refreshing before the sun returns.

VALUE OF ALABAMA COAL IN RELATION TO THE GULF OF MEXICO.

Future importance of the Gulf—Views of Maury—Military necessity for coal—Report of Major Chase—Views of John T. Milner—Table showing relative value of Alabama coal—Comparison with Pennsylvania—Increase of steam commerce—The Panama Railroad—The Fernandina Road—Views of Senator Yulee—Insulating the Gulf commerce, etc.

THE coal and iron of Alabama are nearest to the great ports of the Gulf, Mobile, Pensacola and New Orleans, and must, from the necessity

of the case enter largely into the grand commerce which engages the steam navigation of this interior sea, which has become one of the most important highways of nations. Commodore Mathew F. Maury has thus predicted the future importance of the Gulf of Mexico :

“A sea is important for commerce, in proportion to the length of the rivers that empty into it, and to the extent and fertility of the river basins that are drained by it. The quantity and value of the staples that are brought down to market depend upon these. The Red Sea is in a riverless district. Few are the people, and small are the towns, along its coast. Its shores are without valleys, not a river emptying into it; for there is no basin for it to drain. Commercially speaking, what are its staples, in comparison to those of the Mediterranean, which gives outlet to rivers that drain and fertilize basins containing not less than one million and a quarter square miles of fruitful lands. Commercial cities have never existed on the shores of the Red Sea. Commerce loves the sea; but it depends for life and health upon the land? It derives its sustenance from the rivers and the basins which they drain; and increases the opulence of nations, in proportion to the facility of intercourse which these nations have with the outlets of such basins.

“The river basins drained into the Gulf and Caribbean Sea, greatly exceed in extent of area and capacity of production the river basins of the Mediterranean. The countries in Africa, Asia and Europe, which comprise the river basins of the Mediterranean are, in superficial extent, but little more than one-fourth the size of those which are drained by this sea in our midst. It is the Mediterranean of the new world; and nature has laid it out on a scale for commerce far more grand than its type in the old; that is, about forty-five degrees of longitude in length, by an average of seven degrees of latitude in breadth. Ours is broader but not so long; it is, therefore, more compact. Ships can sail to and fro across it in much less time, and gather its articles of commerce at much less cost.

“Had it been left to man to plan the form of a basin for commerce on a large scale—a basin for the waters of our rivers and the products of our lands—he could not have drawn the figure of one better adapted for it than that of the Gulf, nor placed it in a position half so admirable. The Mississippi and the Amazon are the two great commercial arteries of the continent. They are fed by tributaries with navigable length of channel, more than enough to encircle the globe.

“The products of the basin of the Mississippi, when they arrive at the Balize, may, in twenty or thirty days, be landed on the banks of the Orinoco and Amazon. Thus, in our favored position here in the New

World, we have, at a distance of only a few days' sail, an extent of fruitful basins for commercial intercourse which they of the Old World have to compass sea and land, and to sail the world around to reach.

"On this continent Nature has been prodigal of her bounties. Here, upon this central sea, she has, with a lavished hand, grouped and arranged in juxtaposition all those physical circumstances which make nations truly great. Here she has laid the foundation for a commerce the most magnificent the world ever saw. Here she has brought within the distance of a few days the mouths of her two greatest rivers. Here she has placed, in close proximity, the natural outlets of her grandest river basins. With unheard-of powers of production, these valleys range through all the producing latitudes of the earth. They embrace every agricultural climate under the sun; they are capable of all variety of productions which the whole world besides can afford. On their green bosom rests the throne of the vegetable kingdom. Here commerce, too, in time to come, will hold its court.

"The three great outlets of commerce—the Delta of the Mississippi, the mouths of the Hudson and Amazon—are all within two thousand miles—ten days' sail of Darien. It is a barrier that separates us from the markets of six hundred millions of people—three-fourths of the population of the earth. Break it down, therefore, and this country is placed midway between Europe and Asia; this sea becomes the center of the world, and the focus of the world's commerce. This is a highway that will give vent to commerce, scope to energy, and range to enterprise; which, in a few years hence, will make gay with steam and canvas, parts of the ocean that are now unfrequented and almost unknown. Old channels of trade will be broken up, and new ones opened. We desire to see our own country the standard-bearer in this great work."

The following report of Major Chase, of the United States army, will show the importance, in a military point of view, of coal in the Gulf:

"Considering that war steamers would enter largely, if not exclusively, into our naval forces in the Gulf of Mexico, it is important that convenient depots for coal should be established. Deposits of coal could be made at Bahia Honda, and at Key West. At Tortugas, a three years supply for *thirty steamers* could be constantly maintained. A position for a coal depot on some point on the western coast of Florida is certainly necessary. Tampa Bay would probably afford the requisite depth of water for heavy steamers, and convenient sites for the depot and its defense. Thus held, it would also give protection to vessels seeking

refuge from an enemy. A coal depot would be established at Pensacola and at Mobile Point, under the protection of Fort Morgan. Another depot for coal would afford great facilities to steam operations, if established at Ship Island. A strong battery, but not costly, would protect the harbor. This depot would be easier of access than the one at Fort Jackson on the Mississippi, and would afford supplies, not only to the light steamers cruising along the coast, but to those of the heaviest class. A depot at Fort Jackson would be necessary to enable the steamers descending from Memphis to take in a full supply of coal before proceeding to sea."

The commerce of the Gulf must be supplied with coal. John T. Milner, Esq., a distinguished engineer of Alabama, to whose report the public are indebted for the valuable facts and suggestions compiled in this chapter, says that "The stormy capes and sunken reefs along the coast of Florida, that so hinder our commerce in going out, will protect our coal from competition from the Atlantic States; and Alabama must be to the countries around this central basin, what Pennsylvania is to the Atlantic States. Her coal must drive their ships, their mills, and their machines. As yet, but little coal of any worth has been found upon the Pacific coast. An inferior shaly stuff has been found in Chili, Australia and California; but it will never do to carry ships across the seas."

The following table will show the price of coal in 1860, at different points accessible by the Alabama coal, and the cost of such coal delivered at these points:

	Pennsylvania and other Coal.		Alabama Coal	
	Price per Ton.	Rates of Freight from Philadelphia to	Price per Ton	Rates of Freight From Mobile and Pensacola to
English Coal.....	\$ 2 60	.....	.....	.....
Philadelphia.....	3 50	.....	.....	.....
New York.....	4 50	\$0 95	.....	.....
Baltimore.....	.....	.....	.....	.....
Charleston.....	6 00	1 75 to 2 00	.....	.....
Savannah.....	6 00	1 75 to 2 00	.....	.....
Key West.....	8 00	2 00 to 3 50	\$6 85 to 7 00	\$ 1 35 to 1 50
Havana.....	10 00	3 50 to 5 00	7 00 to 7 00	1 50 to 2 00
Kingston, Ja.....	10 90 to 11 40	3 50 to 5 00	7 50 to 8 00	2 00 to 2 50
Pensacola.....	10 00 to 14 00	5 00 to 6 00	5 00 to 6 50	.....
Mobile.....	9 00 to 14 00	5 00 to 6 00	5 00 to 6 50	.....
New Orleans.....	7 50 to 12 50	5 00 to 6 00	6 25 to 6 00	75 to 1 00
Tampico.....	10 00 to 15 00	6 00 to 7 00	7 25 to 7 50	1 75 to 2 00

Vera Cruz.....	15 00 to 20 00	6 00 to 7 00	7 25 to 7 50	1 75 to 2 00
Aspinwall.....	10 00	6 00 to 7 00	8 00 to 8 50	2 50 to 3 50
Pernambuco.....	10 00 to 12 00	7 00 to 8 00	8 50 to 9 50	3 00 to 4 00
Panama.....	25 00 to 30 00	20 00 to 25 00	10 50	5 00
Carthagea.....	11 00 to 15 00	7 00 to 8 00	7 50 to 8 50	2 00 to 3 00
San Francisco....	.....	25 00	20 50	15 00
Melbourne.....	50 00	25 00	20 50	15 00
Talchaana.....	21 00	25 00	20 50	15 00
Acapulco.....	30 00 to 35 00	25 00 to 30 00	15 50	10 00

It being an established fact that Alabama has coal enough to supply the wants of the entire continent, that it is reached with facility by her rivers and railroads, and that this coal can be laid down at Mobile, New Orleans, Key West, Havana, Tampico, and the other Gulf ports, at a far less cost than the coals of Pennsylvania or of England, it remains to be seen what is the probable demand for coal to supply the steam marine of the Gulf. This subject has been anticipated by the remarks of Commodore Maury, but we can not refrain from adding the clear and practical views of Mr. Engineer Milner :

"The Gulf of Mexico is soon destined to be the scene of the busiest commerce the world ever saw. The trade of our lakes in 1856, amounted to \$608,000,000. Certainly that of the Gulf, surrounded by so many millions of people, and holding, as it does, the mouth of the two rivers that drain one-fourth of the productive land of the civilized world, will soon double that amount. To move this commerce, our Alabama coal is *the nearest, the cheapest, and the best.*

"The Collins steamers used from eighty to one hundred and twenty-eight tons of coal per day, according to speed. Our small steamers in the Gulf use from twenty-five to thirty. Thirty steamers in the Gulf will use in a year, running two hundred days each, on an average forty tons per day, or two hundred and forty thousand tons. The Government have, and always will have, a number of steamers in the Gulf. The railroads centering in it will demand many more. The port of Havana is the rendezvous of the Spanish fleet. The business of the Gulf is emphatically that of steam ; so that I can not think my estimates high.

"Alabama is to the Gulf what Pennsylvania is to the Atlantic States. The amount needed for ten years to come in all quarters from our mines is only conjectural. It is not too much to say we will need three hundred thousand tons per annum. This at \$3 15 per ton, the price from Montevallo to the Gulf, will pay \$945,000 to *three* Railroads south from Montevallo, for transportation, or seven and a quarter per cent. on thirteen million dollars, the amount necessary to build three first class

railroads to the Gulf. The Reading Railroad cost, per mile, \$195,558, or \$19,262,720 for ninety-eight miles; more than the amount necessary to build three railroads in Alabama, two hundred and twelve miles long each. This great difference in cost is the reason why Southern railroads pay so much better than Northern roads. Suppose, then, the three routes, *via* Montgomery, Selma and Uniontown, had the average coal tonnage of the Reading Road for five years past, and nothing more to do. At the above rates, their gross receipts would be \$6,015,500. Take one-half for expenses and we will have \$3,008,250, or over twenty per cent. net profit on coal alone. Examine the tables and watch the growth of this trade in Pennsylvania on only one route, and we certainly are not over the mark. The Reading Railroad pays over seven per cent. net, notwithstanding its enormous cost. The same may be said of all roads engaged in transporting coal.

“Coal, as a fuel for railway engines, is destined to save millions of dollars. It has been found by actual experiment, that the cost of running a locomotive with coal is less than one-half the expense of running with wood as fuel. Experiments have been made on the Illinois Central, the New Jersey Central—in fact, throughout the Northern States; and even in Massachusetts, where coal is worth six dollars and over per ton, it is found that the saving in expense is equal to one-half over wood. From a very intelligent source, the calculation has been made, that the saving from the use of coal instead of wood as a fuel on the railways of the Union, will be ten millions of dollars per annum, or one per cent. on the cost of the railroads in the country.”

Mr. Milner proceeds to say that by means of the South & North Alabama Railroad, now in progress of construction between the city of Montgomery and Decatur, upon the Tennessee River, running directly through the heart of the mineral region of Alabama, and connecting at Montgomery with roads to Mobile and Pensacola, coal could be delivered upon the basis of the prices of 1860, at from five to six dollars per ton at Mobile and Pensacola, and at any point on the Gulf of Mexico, for two dollars more, or for seven and eight dollars per ton, and at Aspinwall for three dollars more.

“By means of the Tehuantepec and Panama railroads, it can be delivered in the Pacific, allowing these roads three cents per ton per mile, or double the charge in the United States, at twelve and thirteen dollars, and ten and eleven dollars. The isthmus steamers on both sides must continue for all time to consume large quantities of coal. The Pacific Railroad, if built from Vicksburg to San Francisco, can not carry freight one-half as cheaply to San Francisco and China, as by way of Tehuante-

pec and Panama. The greatest drawback to the commerce of the Gulf and Pacific is the cost of coal. Supply this at a cheap rate, and the highway of commerce will be directly through the Gulf of Mexico, and along some of the isthmus routes to the Pacific. The amount needed for ten years to come, after the completion of the Central Railroad, is only conjectural. The produce shipped from Galveston, Matagorda, and even New Orleans, where only small vessels can enter, is to a considerable extent sent to New York and Boston, for transshipment across the ocean, in large and cheap carriers. The coasting business of all commercial nations is now being done by steamers, and why not in the Gulf the same way? The railroads across the Peninsula of Florida; the deep water at Fernandina and Brunswick, on the Atlantic, will offer every facility for the successful transshipment of cotton to Europe, in large vessels."

Another important fact connected with the prospective value of Alabama coal, is the probability of the high rates of Insurance, and dangers of navigation around the Keys, throwing the greater portion of the commerce of the Gulf across the Peninsula of Florida, and into the port of Fernandina, thereby insulating the traffic of the Gulf, and forcing the steamers to depend upon the Gulf States for coal.

The port of Fernandina, next to Norfolk and Pensacola, is the best in the Southern States, as the following table will show :

Ports.	Depth of Water in feet.	
	Low Tide.	High Tide.
New York.....	22 feet.	27 feet.
Philadelphia.....	18 feet	25 "
Norfolk.....	25 "
Charleston.....	15 "
Savannah.....	17 "
Brunswick.....	20 "
Fernandina.....	21 "
Pensacola.....	22 "
Mobile.....	21 "
New Orleans.....	14 to 16
Galveston	12 "
Matagorda.....	11 "

The following extracts from an article on the subject, in the *Charleston Courier*, supposed to be from the pen of Senator Yulee, of Florida, will show the relative importance of this city, and the route of which it is the exponent:

"The entrance to this port is easy with all winds; the channels (of

which there are three), are straight; the harbor deep, varying from twenty to fifty feet, and almost completely land-locked; the anchorage extension, and the holding ground, of the best description. The deep water line reaches close to the shore for a length of two miles, so that a continued wall, but little advanced from the line of shore, will give wharfage for two miles, with a depth of twenty to thirty feet at low water, and warehouses can line the wharf front. The entrance from the sea to the wharves is about two miles, and from the plateau of the town the approach can be observed seaward, as far as the telescope can sight. The depth on the bar is stated in the report of the War Department to be fourteen feet at low water, with a rise of water at ordinary tides of six feet, and at neap and spring tides of seven and a half to nine feet, thus giving a depth on the bar varying from twenty to twenty-three feet. The fact is indisputable, that the sea route through the Straits of Florida is the only one that competes with the Florida Transit for the immense commerce of the Gulf, coming from ports having but little water.

"It is ascertained, by reference to the most reliable statistics, that the average time consumed by first-class sailing vessels between New York and New Orleans, is twenty days; that the average rate of freight between these cities by sailing vessels is six dollars per ton, and by steamships, thirty cents per cubic foot; that the rate of insurance by the sea route averages one and five-eighths per cent. Estimating merchandise to average in value one thousand dollars per ton measurement, the following statement will show the cost by these modes of conveyance:

	Sailing vessels.	Steamships.
Freight	600 00	1,200 00
Insurance	1,787 50	1,787 50
Total.....	\$2,387 50	\$2,987 50

The cost by the Fernandina route, including transshipment and all expenses, will be as follows:

By Steamship via Fernandina.....	600 00
Charges by Railroad across Peninsula.....	414 00
Insurance seven-eighths per cent.....	962 50
Total.....	\$1,976 50

"Showing a saving of four hundred and eleven dollars over sailing vessels, and one hundred dollars over steamships running around the Keys. The saving in time will be still greater than in expense of transportation.

"The rates of insurance are the principal causes of the high cost around the Capes. The rates from New York to Fernandina are five-eighths per cent., and to New Orleans or Mobile, around the Capes, one and five-eighths per cent.

"If the Fernandina route can command the trade on high-priced goods between the Eastern States and the Gulf ports, it must, for like reasons, command the trade of the whole area of country dependent upon those ports. Taking St. Louis, for example, it has been carefully estimated that merchandise can be laid down there, from New York, by the Fernandina route, at much lower rates for transportation, than by the Western land or water routes, and in as short a time. The total cost of the Fernandina route will be as follows:

From New York to New Orleans (as above), per ton.....	\$19.76½
From New Orleans by the Mississippi River.....	
To St. Louis (including insurance), say.....	7 00
Total.....	\$26.76½

"The average cost by the several railroad routes is thirty-two dollars. The difference in favor of the Fernandina route is five dollars and twenty-three cents."

The old route around the Capes, for costly freights, will soon be abandoned, provided cheap steam power can be obtained in the Gulf. That power lies in the heart of Alabama, within stone-throw of her Grand Trunk Railroads, and cropping out upon the very banks of her rivers.

RAILROAD SYSTEM OF ALABAMA.

Longitudinal and latitudinal Roads—Diagonal Roads—The various lines—Legislative provision—The South and North Road—Connection with the Northwest—Opening the mineral region—Relations to the Gulf—Passenger traffic, etc.

THE railroad system of Alabama, already built and partially built, embraces three roads, with branches running East and West, in the northern, middle and southern portions of the State—two lines running Northeast and Southwest, and two lines running North and South. The Memphis and Charleston road is already built, and runs through the northern portion of the State, binding the Atlantic and the Mississippi together. The Montgomery and Eufaula road is nearly completed and traverses several of the richest counties of east Alabama.

It will ultimately be one of the links of a line from Montgomery to Brunswick. The Montgomery and West-Point road runs from West-Point, on the border of Georgia, to Montgomery, being a connecting link of the Mobile, Atlanta & Augusta line; and the Selma & Meridian Railroad is built from Selma to Meridian, where it crosses the Mobile and Ohio Road, giving a railroad connection between Selma and Vicksburg, Mississippi. The gap between Montgomery and Selma has been filled by steam navigation on the Alabama River, which is plied by first-class steamers. But this gap will be supplied during the present year (1869), by railroad, and will, for passengers at least, supersede river navigation. When this road is built, it will supply the only link wanting in the chain of railroads extending in an almost due West course from Savannah, Georgia, to Monroe, in Louisiana, and a line which must eventually become the initial trunk of the proposed Southern Pacific Railroad.

The Mobile and Montgomery Railroad runs from Tensaw, a landing upon the river, above Mobile, with which it is connected by steamboats, to Montgomery, and connects at Pollard with a branch road to Pensacola. This road from Pollard to Pensacola, was in running order during the war, and will soon be ready for travel again, a company being now at work (in 1869), rebuilding the bridges and laying the iron destroyed at the evacuation of Pensacola by General Bragg. Connecting with the Mobile and Montgomery Railroad at Pollard, is the Mobile and Girard Railroad, running from opposite Columbus, Georgia, and intended to secure a straight and direct connection with Mobile. This latter road has been built to within seven miles of Troy, a distance of seventy miles from Columbus. It has a land grant of five hundred thousand acres, which secures its continuation. Lower down on the Chattahoochee, at a point called Columbia, the Savannah and Mobile Railroad has been located through the southern tier of counties, and will connect with the Mobile and Girard Road at or near Andalusia, in Covington county. This road has a land grant of three hundred and fifty thousand acres, and when built, will secure almost a straight line from Savannah to Mobile. By a glance at the map it will be seen that these roads tap, latitudinally, every section of the State, and connect the most prominent points with Mobile on the Gulf, Savannah on the Atlantic, and Memphis and Vicksburg on the Mississippi.

The roads which traverse the different regions of the State, from Northeast to Southwest, are the Alabama and Chattanooga road, and the Selma, Rome and Dalton Railroad. The first connects Chattanooga, Tuscaloosa, and Meridian in Mississippi, passing down on a parallel with

the continuation of the Appalachian range, and when completed, presenting the most direct communication between New York and New Orleans, by way of East Tennessee. This road is now being vigorously pressed forward by a company composed mainly of New England men, of which Mr. Stanton, of Boston, is President.

The Selma and Rome Railroad runs almost parallel with the Northeast and Southwest, and has already been alluded to in a former chapter. At present it presents a direct out-let to Charleston for the cotton of Central Alabama, and the minerals which exist in profusion all along its line. It is proposed to extend this line southward across the Alabama River, and intersect the Mobile road at Pollard, thus giving a much quicker communication to Northern travel, by way of Selma, than is now given by way of Atlanta and Montgomery. The Selma and Rome Railroad is now in running order. The Alabama & Chattanooga Road has about twenty miles in running order at the Chattanooga end, and is being pressed forward vigorously by the company of Northern capitalists who have taken hold of the enterprise under the Presidency of Mr. Stanton.

A very important road to Alabama is the Mobile and Ohio Road, which is intimately connected with the railroad system of Alabama, although but a few miles of it lie within the State. This road was completed by the enterprise and capital of Mobile. One of its branches runs to Gainesville, in Sumter county, Alabama.

The roads which traverse the State, longitudinally, are the Eufaula, Opelika and Guntersville Road, the Opelika and Elyton Road, and the North and South road, from Montgomery to Decatur, upon the Tennessee River.

The proposed Opelika and Elyton Road is designed to present a more direct route from Memphis or Nashville to Savannah than any of the others.

With regard to the Eufaula, Opelika and Guntersville Road, that portion of it which lies between Guntersville and the Coosa River, will, doubtless, become the connecting link between the Tennessee and the Coosa, in the absence of a Canal. It also forms a segment of the proposed line from Decatur to Atlanta, by means of which Atlanta avoids the great elbow at Chattanooga, in her communication with Memphis and Nashville. The peculiar value of this road is thus set out, in a circular from Hon. J. L. Pennington, President :

“Construct a road to connect with the Montgomery and West-Point Road at Opelika, and the Selma, Rome and Dalton Road at Oxford, and you place Opelika, Montgomery, Columbus, and all that rich cotton-

growing region of Southwestern Georgia and East and Southeast Alabama, at least fifty miles nearer to Chattanooga, Nashville, Louisville, St. Louis, Cincinnati and Chicago, and the granaries and meat-houses of the great West, than they are at present by the route by Atlanta. And this advantage in distance and time will give to the Oxford and Opelika route a business in freight and travel second to that of no other road in the State.

"The construction of this road will not only give the people along the line easy access to market, but it will develop the natural resources of the country, increase the population, add to the productions of the soil and enhance the general prosperity. And we think we hazard nothing in the prediction that, when completed, it will be one of the best paying roads, not only in Alabama, but the South."

In order to encourage the completion of these lines, which unite the more important highways, the Legislature of 1868 made an Act which provides that, "Whenever any railroad company now incorporated, or which may hereafter be incorporated, by the General Assembly of Alabama, shall have finished, equipped and completed twenty continuous miles of road, at or near either or both ends of the road, it shall be the duty of the Governor of the State of Alabama, and he is hereby required to indorse, on the part of the State, the first mortgage bonds of said railroad company, to the extent of sixteen thousand dollars per mile for that portion thus finished, equipped and completed; and when a second section of five miles is finished, equipped and completed, it shall be the duty of the Governor of the State of Alabama, and he is hereby required to indorse the first mortgage bonds of said railroad company to the extent of sixteen thousand dollars, for the said section of five miles so finished, equipped and completed; and this rate of indorsement shall be continued upon the same conditions and terms for each subsequent section of five miles, until said railroad is completed."

But the most important road to Alabama, and the one which, above all others, will more speedily develop the magnificent resources of this State, is the South and North Alabama Railroad, twenty-two miles of which is now in operation between Lime Station, upon the Selma and Rome Road, and the Cahaba River. This road runs through the heart of the iron and coal regions, and will be the great outlet for the vast mineral stores of that part of the State. By this and the connecting roads, vast deposits of coal may be made at Pensacola, to supply the navy-yard and steamers of the Gulf. A large part of this road is already graded. It has a land grant of four hundred and twenty-eight thousand two hundred and eleven acres, embracing coal and iron lands,

some of which are of untold value. Along this, and the Northeast and Southwest Road, furnaces, foundries, and rolling mills can be built, to supply iron to every railroad in the United States.

A glance at the map will show that when this system of railroads is completed, there will be but three or four counties in the State without railroad facilities. The Mississippi River, at Memphis and Vicksburg, is connected with the Atlantic, at Charleston and Savannah—Mobile shakes hands with the cities of the great Northwest. Pensacola has extended her arms to Montgomery, and seeks to penetrate the vast iron and coal fields of the State, and grasp the hands of Nashville, Louisville, and Cincinnati. Savannah seeks a direct connection with Mobile. New Orleans and Mobile will each have a direct line to New York; and Montgomery, the capital of the State, will be connected by rail with every point of the compass in the United States, and with foreign countries by the shortest line either to the sea or the Gulf.

The South and North Road is destined to connect in an air line the city of Nashville with Mobile and Pensacola, passing with one branch through Selma, and with another through Montgomery, and opening up to the Ohio the minerals of Alabama and the tropical products which find their entrance to the ports of the Gulf, and opening to the Gulf the great granaries of the Northwest.

At present, by a Southern route, the only exit from the Northwest, in the direction of the Atlantic coast, is by way of Chattanooga and Atlanta. By that route the distances are:

From Nashville to Savannah via Atlanta.....	593 miles.
“ “ “ Charleston “ “	616 “
“ Memphis “ Savannah “ “	752 “
“ “ “ Charleston “ “	775 “
“ Decatur “ Savannah “ “	557 “
“ “ “ Charleston “ “	580 “

Now, by the completion of the South and North Alabama Railroad, from Decatur to Montgomery, we find that the distances from the above initial points to the port of Brunswick, on the Atlantic coast, a far better port than either Savannah or Charleston, is as follows:

From Nashville to Brunswick via Montgomery.....	623 miles.
“ Memphis “ “ “ “	688 “
“ Decatur “ “ “ “	503 “

That the opening of this line will make Brunswick the shipping point upon the Atlantic coast, in preference to Savannah or Charleston, must be apparent from the fact that Brunswick gives 20 feet at high tide,

Charleston only 15, and Savannah only 17, and that steamships drawing less than 20 feet, can not trade successfully across the ocean, and because the unsurpassed bituminous coal of Alabama can be placed on ship-board at Brunswick cheaper than at the other ports.

In relation to the value of this road, Mr. Engineer Milner, in his report of 1868 to the Directors of the road, made use of the following language:

"The developments during the war show, that in quality, and mining conditions, your coal beds are unsurpassed by any bituminous region on this continent. In addition to an even competition with the Georgia State Road for traffic to the Atlantic, your enterprise has the trade to the Gulf, which the other has not—and especially does it point to the city of Pensacola, destined soon to be to the Gulf, what Brunswick is to the South Atlantic, and for the same reasons.

"The commerce of the Gulf, if it has any commerce at all, must adopt the spirit of the age and pay tribute to the agency of steam. A few weeks ago, I was informed by the President of the Montgomery and West Point Railroad, that he had stopped the shipment of cotton *via* Charleston and Savannah for want of steam transportation. The winds still blow on the Atlantic, but too slow for the restless energy of the commerce of the day. The carrying trade all over the world is fast being usurped by the steam engine, on the water as well as on land. Nature has made the great harbors on this continent. Art has made the great seaport cities, if we except Mobile and New Orleans. The fact of a seaport having no great river running into it, as can be seen by reference to the maps of this continent, takes but little from its importance as a site for a commercial emporium. The trade from the valley of the great river of St. Lawrence, having more navigable surface than any other on this continent, finds an outlet to the sea at the cities of Baltimore, Philadelphia, New York and Boston; and the subjects of the Queen are to-day paying duties at Portland, in Maine, on commodities shipped from Great Britain to Montreal and Quebec. The old system will soon be broken up, and the quick eye of commerce will concentrate from the interior on these great natural harbors where the leviathan steamers can come up and be fed from the interior. Men may doubt this, but it is because they have never studied this subject. In this revolution your road will play a great part, traversing as it does for nearly two-thirds its length the nearest coal fields to the great ports on the Gulf and South Atlantic.

"Again, if we consider the passenger traffic of your road, in addition to that which follows the freights to the seas—we find that by your

road the distance to New York from Montgomery *via* Decatur and Knoxville, is 20 miles less than *via* Atlanta, and practically the same *via* Decatur and Louisville as by Atlanta. If you consider the local distribution of the two roads, we find that the distance from

Nashville to West Point, Georgia, <i>via</i> Atlanta, is.....	386 miles.
Nashville to West Point, <i>via</i> Montgomery, is.....	392 "
" " Columbus " Atlanta,.....	437 "
" " Columbus " Montgomery "	395 "
" " Atlanta.....	298 "
" " Montgomery.....	304 "
From Memphis to Macon, <i>via</i> Nontgomery "	558 "
" " " " " Atlanta.....	551 "
From Decatur to Memphis.....	185 "
To Montgomery.....	183 "
From Memphis to New Orleans, by river..	800 "
" Montgomery it is only 600 miles by river.	

"With the above table before them, no one can fail to see the power of your local distribution. The consumption of your coal in the interior will be small, but there is one fact connected with coal developments, all over the world, without a single exception, so far as I know, and that is, that the demand increases, almost in a geometrical ratio from the day the first car load is shipped."

MOUNTAIN REGION OF ALABAMA.

Attention directed to the mountain country—Testimony of Pennsylvanians—Government lands—Richness of soil—Excellent water—Marble—Iron—Coal—Limestone—Mills—Valley Creek—Iron Mountain—Pine Timber—Hunting, etc.

THE visit of monied men from New England to the mountain region of Alabama, in the autumn of 1868, and the purchase, by a Boston company, of the Alabama and Chattanooga Railroad line (which is now being rapidly constructed directly through that grand mineral section, and along the very base of the Red Mountain, upon an air line between New York and New Orleans), adds interest to the following extracts from a letter written by a citizen of *Jefferson* county to the editor of the *Selma Times*:

"To capitalists, there is not another section of the State that presents the inducements that this does, especially in point of mineral resources.

From the southeastern extremity of the county, Iron Mountain takes its start—known as Red Mountain—and continues its unbroken course through the entire extent of the county, passing out at its northern boundary.

“With this you are somewhat familiar; and in order to represent it fully, I have only to say, that the recent exploration (which was but partial) by capitalists from Pennsylvania, resulted in the exclamation from them as given by the Queen of Sheba to King Solomon, ‘that the half had not been told them.’ Their statement to many here was, that the ore is far superior to any in the State of Pennsylvania, exceeding in per cent. of metal the best there, and existing in more compact bodies and much greater quantities. In substantiation of this belief, they purchased lands now valued at hundreds, or thousands, but prospectively, at millions.

“These parties did not purchase the best, as they never visited the best portions of this ore. There was one fact that I presume they were ignorant of—that is, that large, and I think, the largest portion of this Red Mountain still belongs to the United States Government. But if it is a fixed fact, and we believe it to be so, that the old-styled N. E. & S. W. Alabama Railroad is soon to go into operation, all the unentered odd sections on this mountain will belong to the present owners of that road, which, if developed, will be sufficient of itself to pay the cost of building the road from here to its southwestern terminus. Iron does not alone abound in this region; for on each side of this mountain, are vast fields of coal—the Cahaba coal on the east, and the Warrior coal fields on the west and north.

“Intervening between this Iron Mountain and the Warrior coal fields, lies one continuous valley, running northeast and southwest, under the names of Roup’s and Jones’ valley—yet one valley proper, until it passes beyond the limits of this county, at its northeast boundary.

“This valley, in days of yore, could not well have been excelled for its production, and in beauty, it far surpasses the famous Wyoming Valley. But time, and the ruthless hand of man, have left their impress upon it. From 40 to 60 years it has been ministering to the wants of man, and even yet, it is hard to excel in the richness of its soil. Though much worn, yet with the proper culture, it yields ample remuneration; and when enterprise shall have placed on its bosom its votaries, everything else will give place to science, and it will then blossom as the rose.

“Its lands are what are known as lime lands strictly, and once was a dense canebrake. It is based on a limestone formation; and here and there the lime rock is seen cropping out, sometimes horizontal, at other

places vertical, and again in conglomerate masses, as though nature, in some of her mighty throes, had upturned and hurled them from their proper base. All along the entire length of this valley are beautiful, clear, gushing springs of delightful water, agreeable to take at all seasons of the year, but especially so during the summer season. These, all uniting, form that beautiful stream of ever-running water, known as Valley Creek, which winds in its tortuous course through the valley.

"Here, again, abounds the marble in its accustomed variegated hues; and in no portion of the State is lime so easy of access as here.

"In regard to the Cahaba coal fields, which lie on the east side of Iron Mountain, it is not necessary to say anything, as their partial development must have established their value.

"It is not so with the Warrior coal fields, although explorations have demonstrated the fact that they are far more extensive than the former, and in this county, covering nearly one-half its area. Without facilities for development, they still lie as unburied treasure, extending from the Warrior River to Jones' Valley, while here and there an outcrop may be found. The lands on the Warrior River are exceedingly fertile, and it is to be regretted that none of the contemplated roads will penetrate this section.

"Let one of these roads only tap this coal field, and it will turn a tide of trade to its terminus.

"All through the regions of this extensive coal field, streams of water abound, and on these fields are small but excellent farms. There is no stream of any respectable size, on which there is not one or several mills, making a matter of great convenience to settlers.

"But the water of greatest importance to capitalists is Valley Creek, which is not dependent upon seasons of rains for life, but is constantly fed from all the springs in the valley. You may search the State over, and you can not find a better stream, on which to locate machinery of any kind, but especially cotton factories. This creek, after it leaves Jones' Valley proper, receives in one mile the waters of Five-Mile Creek, and soon again the waters of Little and Big Blue creeks are added to it, making it a stream of over one hundred feet in width, and winding to make its exit out of the mountains, it has left solid stone banks on either side, of such varied height, that a dam of from ten to forty feet could be had. Should capitalists here establish a cotton factory, they would be enabled soon to control the cotton in at least three counties north, as well as the western portion of this. This stream, as it flows onward to the Warrior River, gradually enlarges, until it becomes almost as large as the river at its mouth.

"You will remember that previous to the surrender, Iron Mountain had a number of furnaces and forges upon it, and a great deal of the pig iron that went to the iron works in Selma in those days, was manufactured here. The raid under Wilson destroyed all these works. One furnace has been resuscitated and is now in operation; others are under contract; while with others, the massive ruins and blackened walls only speak of what once they were.

"On the east side of this mountain, for ten or twelve miles, there is a forest of most excellent pine timber, which probably is the only pine of any consequence for many miles.

"The grade of the old N. E. and S. W. Alabama Railroad runs parallel with this mountain to its west side, not far from its base, and the Central Road, it is supposed, will cross it at or near Grace's Gap.

"Capitalists here can find a fine field for investment, and one that no doubt will be very remunerative.

"But the day will soon pass for buying cheap property here. Land has already advanced fifty per cent. since the surrender.

"To men of mercantile business, land-owners in your section or any other portion of the State, I can safely say here is the spot for you. There are seasons when you desire to be free from the toil, vexation and trouble of business. Here you may find rest from labors, and while away many a delightful hour, with dog and gun, in chase of the noble deer; or, with the hook and line on the stream, you may enjoy a meal upon the delicious mountain trout.

"The day will certainly come when the landed system of England will, to a certain extent, be adopted here by the large land-owners in the South. Now is the time for them to buy a home in this healthy country, where they can raise all necessary supplies, together with stock of every kind, and no rude hand to lure them away after nightfall. To all such I would say, farm out your lands and come among us, and year by year you will be accumulating; but remain where you are, and under the present system you will inevitably become poorer every year."

DISINTERESTED TESTIMONY AS TO THE RESOURCES OF ALABAMA.

Views of distinguished men—Remarks of Hon. John Francis Maguire, M. P.—Remarks of Hon. W. D. Kelley, M. C.—More natural wealth than New England—Generous spirit of the South—Meeting at Washington—Remarks of Hon. J. W. Forney—Remarks of Col. Printup—Correspondence of the New York Times, etc.

WE have already given, in other portions of this review, the statements of distinguished gentlemen as to the resources of Alabama, and as to the peculiar inducements offered to immigration and the investment of capital in agricultural and manufacturing labor. Cumulative testimony from distinguished strangers adds to the force of what has been already said.

At a dinner given January 15, 1867, at Montgomery, to the Hon. John Francis Maguire, M. P. for Cork, and editor of the *Cork Examiner*, that gentleman, in response to a toast, said:

"England possesses two important elements of manufacturing success, coal and iron. Alabama possesses the same, and perhaps in greater abundance. As yet, it has not been discovered that Ireland possesses them in much abundance; still, as the coal beds of England are not very distant from any part of Ireland, there is no reason why Ireland should not become a manufacturing country; and in fact the supply of coal, on which Belfast depends for its unrivaled success in the manufacture of linen, is drawn from the other side of the channel. But look at Alabama, and what do you behold? Why a ridge of iron ore extending over a hundred miles through the center of the State, and coal beds as vast and inexhaustible as those of Pennsylvania. Here then are the two great elements of manufacturing success and national wealth placed by the beneficence of Providence at your disposal, within your grasp, soliciting your acceptance; and on every side, wherever you turn, you have the raw material of the most valuable fabric in your fields, at your very door. Why, I ask, should there not be a Lowell in Alabama as well as in Massachusetts? You purchase and consume cotton fabrics manufactured many hundred miles from your State, and yet you have every means in your own hands of supplying yourselves with the article for which you supply the raw material to others. The advan-

tages are on your side rather than on the side of Pennsylvania. She possesses a magnificent supply of coal, but so do you; but she has to procure the raw material of her staple manufacture from you, while you grow it on your fields. Competition from England you can not dread—your high import duties shut out all apprehension on that score, while the saving in transit, both of material and fabric, will enable you to compete successfully with the manufactures of the Northern States. The people of Alabama now perceive that their prosperity rested on a too narrow basis, and that the wisest policy is to extend that basis as widely as possible, so as to embrace every available resource. The total derangement of the labor system of the State renders a radical change indispensable, and the sooner the enlightened public mind of the country comprehends the seriousness of the position, and the means by which it may turn momentary evil into lasting good, the better. What has happened, terrible and trying as it has been, may have been intended by Providence for wise and salutary purposes; and if out of the present difficulty the brave-hearted men of Alabama fashion a glorious future of successful industry for their country, they may one day look back without regret and without bitterness to that desperate and, indeed, unparalleled struggle which will be recorded in the proudest page of the history of nations."

On the 18th of May, 1867, Hon. W. D. Kelley, member of Congress from Pennsylvania, addressed a meeting of citizens of Montgomery from the portico of the capitol of Alabama. He bore the following testimony to the wealth of the State and to the advantages offered to immigrants:

"Alabama has more natural wealth than all the New England States together. Alabama abounds in coal and iron, while New England is without any, save a little bed of magnetic ore on the borders of Connecticut and Massachusetts, so small that it would scarcely be noticed amid the broad veins of heaven-blessed Alabama. She has no coal, while coal and limestone in immense deposits lie in close proximity to your beds of iron ore. Some of the States of New England can grow no wheat, no corn, no rye. So thin and sterile is her soil in many places that they sow rye, not for the grain, but the straw, to manufacture into hats and other articles; and so wide apart do the stalks grow that at the proper season little children find employment in plucking them stalk by stalk, and laying them down perfectly straight, that those who are to work them into fabrics may have them at their greatest length. In my own dear Pennsylvania, it will be late in August before the wheat is ripe, yet yours in favored parts of the State is now ready for the sickle.

"But ample and diversified as are the agricultural resources of Alabama, she has deemed it wise to devote herself to one single crop, and depend on other States for corn and other products of the soil. This was the great error of her people; for that State is richest, most prosperous and independent, that can supply all its wants within its own borders, and by the diversity of its productions provide remunerative employment for all its people. You can do this in Alabama. Every vegetable grown in the North, can be successfully produced upon some of the beautiful hill-sides of your extensive State. Do you doubt this, and say, as one of your citizens said to me, that you can not raise root plants because their tendency is to run to woody fibre? I tell you that that is because your culture is artless, and because you continuously raise crops that exhaust the soil, and make no return to it in manures containing the elements you abstract.

"Invoke the aid of experience and science, and give to your land sufficient and appropriate food, before you deny to a State so broad and varied in its topography and climate, any measure of productive power. But to return to the contrast between your State and New England. She has no copper, lead or gold, while nature has given them to Alabama with lavish hand. I have been surprised in the last hour by discovering, through the kindness of your Governor, in the executive chamber, your capacity to supply the country with brimstone. Many of you probably do not know, indeed I apprehend that few of the best informed of you know, how primary an element of our life this is. A philosophic statesman has said that the best test of the advance of a people in civilization was to be found in the quantity of crude brimstone consumed per capita by its people. It enters into our chemicals, our cloths of all descriptions, and almost every department of science and the mechanic arts. And if you but develop your resources in that behalf you bring within your own limits the millions of dollars in gold which we now send abroad every year for its purchase.

"But who knows what the resources of Alabama are? They have not been tested by experience or explored by science. When interrogated as to them by strangers, you tell them that you have the everglades or piney woods; the broad, rich cotton lands of Alabama; the hill country and the wheat-growing region to the north of us; and north of them again, but still within your limits, pasture and cattle lands. Inadequate as this statement of your resources is, when you are able to proclaim it in connection with the fact that you have established a generous system of free schools, and secured, by law, fair wages for honest

labor, millions of toiling men will come to dwell among you, and alleviate the burdens that now oppress you.

"I am gratified in being able to report that I have found throughout the South a generous spirit, a readiness to acknowledge the right of all to travel freely, and to discuss with frankness and candor the issues of the day; and though in some quarters a different spirit prevails, I believe that in five years the South will be more liberal than the North has been."

An informal meeting of Northern and Southern gentlemen was held at the rooms of Mr. John W. Forney, in the City of Washington, 553 New Jersey avenue, on the evening of Friday, February 12, for the purpose of consulting about the proper means for the development of the South. Among those present were Hons. William D. Kelley, J. K. Morehead, Henry L. Cake, and Daniel M. Morrill, of Pennsylvania; Hon. Ignatius Donnelly, of Minnesota, Hon. Samuel Pool, United States Senator from North Carolina; General Longstreet, of Louisiana; Hon. D. K. Cartter, of the Supreme Court of the District of Columbia; Hon. Joseph S. Wilson, Commissioner of the General Land Office; General Horace Capron, Commissioner of Agriculture; Colonel Joseph W. Cake and Geo. H. Boker, Esq., of Philadelphia; Mr. Ghio, Superintendent of Weldon and Portsmouth Railroad; Captain Hotchkiss, J. S. Barbour, Esq., President Orange and Alexandria Railroad, and John Ridgway, of Lynchburg, Virginia; Colonel Blanton Duncan, of Kentucky; Colonel Printup, of Georgia; Hon. Hiram Barney, of New York; General John C. Fremont, of New York; General Thomas L. Kane, of Pennsylvania; Hon. John S. Carlisle, of West Virginia; Geo. W. Riggs, Esq., and J. D. Hoover, Esq., of Washington, and several others.

A great many facts were elicited during the consultation, and at the adjournment it was resolved that a summary of the proceedings should be laid before the public.

Colonel Forney introduced the subject by remarking that he had long felt the necessity of a demonstration in the right direction for the development of the material productions of the Southern country, in which he believed lay the true solution of the problem of practical restoration between the two great sections. After the election of General Grant, as the important part of the political work, had been accomplished, he believed that all good men in the North should devote themselves to the development of the substantial interests of our country. So he turned his eyes to the South and went down there, a volunteer pioneer of the extreme men of his school, for the purpose of seeing whether he could

not attract others to follow his example, and in that spirit he wrote four or five hasty letters from a portion of one of the eleven reconstructed, or recently insurgent States. When he returned home, he found that he had struck the right chord—a chord that was thrilling from one end of the country to the other—proving that the Northern people were anxious to be placed once more in unity with the South. In the South he found that while they had some differences in politics, there was no difference about material interests. They were all of one party in regard to them. Never, at any time, had any cause so thoroughly enlisted the attention of the entire Southern people as this. He found an equal unity among the Northern people to assist and to encourage them. All interests—moral interests, financial and political—and all parties in the North, are struggling to see which should obtain the mastery in the South. The little work that he had accomplished had been followed by some wonderful demonstrations. Many persons had called to see him, and hundreds of letters had been addressed to him, asking for information. Several prominent men of the North and the South being in Washington, they suggested this informal gathering for general consultation. They were there citizens of the same common country—they were there one brotherhood, belonging to the same common stock. The chief political work for which the Republican party had set out having been accomplished, he now proposed to devote his energies to the development of the resources of the South.

Judge Kelley said, that during his Southern trip he found, to his surprise, the finest wheat fields he had ever seen in any region. He had seen in Louisiana fields of wheat that would yield to the acre twice as many bushels as the most fertile fields of the Northwest, and in localities where the expense of transportation to Liverpool or New York was comparatively nothing. On the farm of Hon. J. R. Robertson, sixty bushels of Southern wheat to the acre had been raised, and it could be carried to the tropics in flour without danger of souring. Never before was such a thing known. These magnificent fields were visible from the railroad, and within sight of the steeples of New Orleans, while splendid patches of white clover could be seen in every direction. He had as soon expected to find gold growing on the trees, as a natural crop of white clover within sight of New Orleans. The whole South abounds not only in natural agricultural wealth, but in iron regions, and in coal with which to smelt it. The South has also the richest copper region in our country, all within sight of a road soon to be constructed through the valleys of the mountain region of Tennessee and Virginia, opening up vast fields for investment of Northern capital from the Northeast to the

Gulf States—in which already handsome sums have been expended. Let us take a retrospective view of this country of an hundred years, and we will see that the material wealth of the South was transcendently in excess of the North, and that prior to the American war the greatest stores of the world were hidden from the sight of the people. Pennsylvania is abundantly rich, and yet East Tennessee, and some sections of other comparatively small States, are richer in diversified mineral wealth and great natural resources than our own boasted commonwealth.

Colonel Printup, of Georgia, said he would briefly state that the iron region to which reference had been made extends into North and South Carolina, the northwestern portion of Georgia, into Alabama, and he presumed would reach to a portion of Mississippi also. There was hardly anything he could say to give his hearers an idea of the immense quantities of iron that exist in Alabama. Mountains of iron could be found in almost every portion of the State, which by analysis had been proven to yield from forty to seventy-five per cent. of pure iron. They have some of the finest ores in America, and the experiment of manufacturing steel from it is now being successfully prosecuted. Specimens of ore crop out at every step you take, and they seem to be quite as prominent as those in Tennessee. We cordially invite gentlemen from the North to come down among us and examine for themselves, and we will extend to them a very hearty welcome. The coal and iron beds of Alabama lie within a short distance of each other. There is a large iron mountain in Alabama, and within four miles of it you find plenty of coal, limestone, sandstone, and rich deposits of lead, all within a circumference of four miles. The mountain is almost a solid bed of iron. There is also an iron hill in Alabama, which lies parallel to the Selma Railroad, about sixty miles in length, composed almost entirely of iron. Superior sandstone, bituminous coal, and various other minerals and splendid lead deposits are also here to be seen. The people of Alabama are a little behind in the way of cultivation, but they were in hopes the North would send them some good scientific farmers to improve their agricultural system, and they would profit by the example. Indeed, they had improved very much lately, from the fact that some Virginia farmers had gone down and introduced the system of Northern agriculture. This has benefited and enhanced their lands in value very materially. Clover had been successfully raised in small fields before the war, but he had no idea how long it would last. In the hills and valleys of Georgia they were enabled to raise all kinds of fruit. In the Northern part of Georgia the peach is a spontaneous production,

and along the railroad you will see lines of peach trees, but this is not the case with apples, which only flourish with cultivation.

Judge Cartter remarked that he discovered, while in the Andes, the higher the latitude the finer the fruit, and especially with apples. They have a much finer flavor when grown on high hills, and the trees have a greater power of endurance.

Colonel Printup said that in Alabama nearly all the fruits of the extreme South and the extreme North could be successfully cultivated.

In addition to what was said by the gentlemen who participated in the meeting held at Mr. Forney's rooms, we have more direct testimony from a New England gentleman, who writes as follows to the *New York Times*, describing the country through which passes the Railroad of which John C. Stanton, of Boston, is President, and Governor Claflin, of Massachusetts, one of the Directors:

"The Alabama and Chattanooga Railroad will pass through the richest portion of the American continent, a district that, in the fertility of the soil, the salubrity of the climate, the immensity of its mineral resources, and its wonderful water power, has few rivals and no superior. It passes through a magnificent grain and cattle-growing region, and then through the heart of one of the finest bodies of cotton lands in the world. In the northern portions of the country through which the Alabama and Chattanooga Railroad passes, there are inexhaustible supplies of iron and coal. The iron is in some cases of such rare excellence that horse-shoes are sometimes made directly from the ore by country blacksmiths. Mr. Thomas, a very wealthy ironmaster from Pennsylvania, has invested three hundred thousand dollars in iron and coal lands in the vicinity of Elyton. The Alabama and Chattanooga Railroad Company owns 256,000 acres of the finest lands in the world that lie along the line of the road. These will be thrown open to immigration on the most favorable terms."

ALABAMA AS A HOME FOR THE IMMIGRANT.

Invitation for white labor—Remarks of Count de Segur—Views of Chas. Nordhoff—Success of white labor in the South—Statement of Gov. Hammond—Views of Edward Atkison—Disinterested statement of the Washington Chronicle—Indorsement of Hon. John W. Forney—Southern homes peaceful, cheap and productive, etc.

WE have shown the resources of Alabama, its boundless minerals, fertile cotton fields, salubrious climate, and splendid system of water courses and railroads. The lands of Alabama can be purchased by the immigrant at low rates—for a mere song compared with the profits which the laborer can realize in a single season.

We have before us a pamphlet prepared in 1864, by a very intelligent gentleman of New York, connected with one of the leading journals of that city—Charles Nordhoff, Esq. The author shows in detail how white laborers have heretofore emigrated from the South northward, in numbers many times greater than the reverse migration. He remarks upon the facts as follows:

“A French writer, the Count de Segur, says: ‘The human race does not march in that direction; it turns its back to the North; the sun attracts its regards, its desires and its steps. It is no easy matter to arrest this great current.’ In other countries all emigration has turned to the southward, by an instinctive movement; but with us the horror of slavery, the aversion of the free laborer to come in contact and competition with slave labor, has sufficed to conquer even this strong instinctive tendency.

“Bear in mind, too, that the South has lost, by this migration, the best class of her citizens. The indolent masters remained; the slaves remained; those free whites who were too poor and helpless and ignorant either to desire or to be able to remove, remained; but there has been a constant drain of the yeomanry of the border Slave States—the forehanded farmers and industrious mechanics, the class whom a State can least afford to lose. These men and their families have helped to fill our northwestern Territories and States; and have taken the places of the thousands who removed from the border Free States in the Northwest. They have faced unwonted winters and harder conditions of life—why? Because *these free workingmen felt slavery to be a curse, a bar to all their efforts.* They were not abolitionists—they brought into the

Free States with their curious hatred of the negro, as though it was the slave and not the master who was their oppressor."

Mr. Nordhoff is not satisfied that this state of things should longer exist. He will not give up the fairest spot on earth to the negro. He would send the white man with his energy, his enterprise and cunning to take charge of the teeming and luxuriant fields, and make a garden out of the desert of the South. Will the white man respond? Slavery is dead.

We give a page or two from the pamphlet:

"Is it no matter to workingmen that they are thus driven out and kept out of the largest, most fertile and pleasantest part of the Union, by the slave labor system, which there robs them of work, and attacks their rights? In the mild climate of the border Slave States, the seasons are longer, the productions more varied; trades which can be pursued in the North during only eight or nine months, may be carried on there all the year round; food is or ought to be cheaper; the workingman and his family need fewer and less costly clothes; in many ways the conditions of life are easier, for the mechanic and laborer as well as the farmer, than in the colder North. But that great region the slave-masters closed against the free workingmen, and preserved for themselves and their slaves.

"The climate is not too hot in any of those States for white men and women to labor in the fields. Governor Hammond, of South Carolina, says: 'The steady heat of our summers is not so prostrating as the short but sudden and frequent heats of Northern summers.' White men work on the levee in New Orleans in midsummer, and have the severest labor put upon them at that. He who writes this has rolled cotton and sugar upon the levee of New Orleans in the month of July, and screwed cotton in Mobile Bay in August. Dr. Cartwright, the great apostle of slavery, rightly remarked: '*Here in New Orleans the large part of the drudgery—work requiring exposure to the sun, as railroad making, street paving, dray driving, ditching and building—is performed by white people.*' This severe labor was put upon the free white workingmen; the slave-owners reserved the light task for their slaves.

"In Alabama, by the census of 1850, sixty-seven thousand; in Mississippi, fifty-five thousand; in Texas, forty-seven thousand *white men, non-slaveholders, labored in the fields*, and took no hurt. Cotton was cultivated in Texas, before the war, with perfect success, by white men; the Germans managed even to raise more pounds to the acre, pick it cleaner, and to get a higher price for it, than the neighboring planters. Olmsted mentions an American in Texas who would not employ slave-

labor, and who, with white men as his help, 'produced more bales to the hand than any planter around him.'

"The mortality reports of the census show that the Southern States are not peculiarly unhealthful. In Alabama, the deaths, per cent., were less than in Connecticut; in Georgia they are 1.23 per cent.; in New York, 1.22; in South Carolina they are 1.44 per cent., in Massachusetts, 1.76, which is precisely the same as in Louisiana, notoriously, till General Butler cleaned New Orleans and drove out the yellow-fever, the most sickly State in the South.

"Nothing, therefore, has kept free workingmen out of these States—nearer to the great markets of the world, having abundant mineral wealth, and in every way more favorably situated than the cold Northeast and the far away Northwest—except the fatal competition of the slaveholders. To avoid that, millions of workingmen, native and foreign born, have removed to the Northwest, until at last the tide of emigration has even trenched upon the inhospitable desert, and has spread beyond the extreme limits of arable land, and far beyond the profitable reach of markets. The Northwestern farmer has burned his corn because he could not afford to send it to the distant seaboard;—was it no loss to him that slavery kept him out of the fertile fields of Virginia and North Carolina?"

"Even had slavery remained in full vigor, the time had come when free labor, seeking new outlets and greater opportunities, would have pressed hardly upon it. If slavery is swept away, free workingmen will hereafter have opportunity in the South, and to all that great region a boundless future of wealth and prosperity opens up. The abandoned farms, the mouldering villages, the empty cottages, will once more be filled with the busy and cheerful hum of the labor of freemen.

"Their cunning will repair the waste of unskillful slave labor; their ingenious toil will redeem the barren fields of Virginia and other Southern States. The tide of emigration, sweeping in that direction, may repeat in the South the marvelous results which it has accomplished during the last twenty-five years in the Northwest; Virginia will be another Minnesota, North Carolina a new Iowa, and in Tennessee will be repeated the story of Ohio."

In addition to what is here said by Mr. Nordhoff, we would call attention to the following remarks made by Mr. Edward Atkison, a cotton manufacturer of Massachusetts, in a pamphlet prepared at the instance of the American Geographical and Statistical Society, of New York:

"It is perhaps needful that we should induce emigration from southern Europe before the question of the cultivation of large crops in

southern Alabama, Mississippi and Louisiana will be fully settled. But there is a broad tract of cotton country lying in Georgia, South Carolina, Tennessee, northern Mississippi, Alabama and Arkansas, the land of farms, not of plantations, on which a million and a half bales of cotton have been produced in a given year, of which a very large portion was produced by white labor, even in the days of slavery. On this section we shall soon see an enterprising community of small farmers, not raising cotton by the plantation system, but on small allotments, under the personal supervision of the owner, himself working in the field. Here we shall soon see Northern economy—the seed no longer wasted, but the rich oil which composes twelve and a half per cent. of its weight expressed and turned to a useful purpose; the cake, the richest food for cattle known, fed out to stock; the land no longer exhausted by the waste of seed, but the manure returned, and the cotton-farm growing richer instead of poorer year by year. And as the population becomes more dense, the towns and villages will increase, and manufactories will become established; and, before many years, we may confidently expect to see the manufacture of the coarser cotton cloth transferred to the South and West, nearer to the place of growth of the cotton, while the North, with its greater skill and more abundant labor, will undertake the finer work which we have not yet drawn away from England.

“Eight to ten acres to the full hand is the limit beyond which the picking force of the plantation can not be carried, but upon the prairies and hills a dense population will, in a few years, be gathered; then we shall find the cotton farmer cultivating twenty, thirty—aye, even fifty acres to the hand, with the certainty that he can call to his aid in the picking season the entire force required, who will be employed during the rest of the year in all the various industries of civilized life, but which dense population the barbarism of slavery has not even permitted to have an existence upon the territory which it cursed.

“On these lands we shall soon see the principle established of making great crops from a small number of acres, new varieties of the cotton plant introduced, like the Tippoerah cotton, grown from a black seed variety, imported from Mexico just before the war, and which yields a staple much like that of Egypt and Brazil, intermediate between the Sea Island and our common cotton.

“We are accustomed to regard the negroes in mass as an aggregate of four millions, but let us cease so to regard them, and consider them in relation to the area of territory on which they are placed, and we find only one family to the square mile.

The most dense negro population in any State is in Maryland, not in South Carolina. And now that slavery has ceased to repel a free white population, it will, by emigration, increase much more rapidly than the black, and presently the negro will cease to be a disturbing element, by being swamped in a dense population of whites.

"We may gain some idea of the profitable nature of Southern agriculture from the fact that, in 1859 and 1860, the current prices at which slaves were hired out by their masters, the lessees assuming the cost of feeding and clothing and the risks of sickness, were from \$250 to \$350 per annum."

In this connection, it is interesting to note also the following extracts from a communication which appeared in the *Washington Chronicle*, of the 24th November, 1868 :

"Not a tithe of the lands in the South are really occupied. Let Northern men buy these lands and settle upon them, and in nine cases out of ten they will have done much better for themselves than if they had gone to the far West. The South needs capital, manufactures, and all kinds of skilled labor. The North, from her abundance, can supply these wants, and mutual benefit will be the result.

"The vast mineral wealth of the South lies almost wholly undeveloped, while Northern men are besought to come with their skill and capital and take it at fabulously low prices. Why will not our Northern people muster the courage to come and see for themselves the inviting field that opens before them? The larger portion of the South is as quiet to-day as their own quiet homes in the North. And then they should remember that emigration carries safety with it.

"If our people would but dismiss their fears, and go to the South as they now go to the West, they would meet a cordial welcome from thousands of Northern people already there, all the loyal Southern people, and a large share of those who took side with the rebellion, while the insignificant Kuklux Klans would disappear like the mist of the morning.

"Northern and Southern people living side by side, and mingling in business intercourse, would soon forget the prejudices that now divide them. Reciprocal benefits will produce reciprocal good feeling."

It is gratifying to see such language as this in a journal which wields so large an influence at the North. The testimony of the witness is the more important when it is seen that in the same copy of the *Chronicle*, the author of the above statement is represented, in a letter from Mr. John W. Forney, the editor, as "an advanced and intelligent Radical, believing in his politics as he does in his religion." Mr. Forney says of this gentleman :

"I have just had a long and somewhat remarkable interview with the writer of the subjoined communication, and I print it because it confirms many patriotic hopes and dispels many grave apprehensions. The writer has resided in the South for nearly three years, and is at the head of a flourishing foundry and machine shop in one of the prosperous Tennessee towns. He is an advanced and intelligent Radical, believing in his politics as he does in his religion. Without being a partisan in any sense, he never conceals his sentiments. He says he has never been disturbed, nor even menaced, for uttering them in trains, steamboats, hotels and the streets. He insists, as you will perceive, that the Southern people should not be condemned for the outrages of their own ruffians, and declares that by this rule no community could escape—certainly not the West, judged by the recent excitements in Kansas." He continues :

"Why should not the South be the favorite home of the emigrant—not only the German, the Norwegian, the Irishman, the Scotchman, and the Englishman, but, above all, the Northern manufacturer and mechanic? My correspondent disposes of the cry as to the safety of these Northern men in the South by saying that every emigrant must run some risk. Look at the Western engineers, surveyors, tourists, and travelers—look at the men, women and children, who brave the rigors of the winter and the barbarities of the savages in the Rocky Mountains! He asks whether any such dangers ever beset the men who go into the South—even into Texas?

"Besides, in the South there are not only hundreds of thousands of acres of land to be had for almost nothing, but there are open highways, a civilized people (let us hope), and a thousand other advantages unknown to the new and far-off West. Before the war, capital and labor sought the South eagerly. The daring Commodore Stockton spent an immense fortune in trying to develop the gold mines of North Carolina. Virginia was the center of at least one great enterprise that attracted millions of foreign money. Heavy outlays were made in the iron and coal mines of Tennessee and Alabama. Northern men flocked in by hundreds, almost by thousands, to take advantage of the fine opening for skilled workmen. But the war came and stopped all, ruining many, and driving away more.

"All this is over. A better state of things has succeeded. The wealth of the soil has been reinforced by the wealth of a great moral victory. The gold mines of North Carolina, the coal and iron mines of Virginia, Tennessee, Alabama, and Georgia; the magnificent plan of connecting the Chesapeake with the great internal rivers of the South—

all these await capital and courage. But the South proffers other opportunities. Look at the hundreds of thousands of swamp lands to be drained by the agencies of science; at the thousands of alluvial acres in Delaware, Maryland, and Virginia (all near the Eastern markets), and at the town sites without number! Look at Mississippi, South Carolina, Louisiana, Texas, with their cotton and sugar fields, marl beds, grazing lands, noble rivers, and equal climates!

“What is needed is emigration.”

STATE POLICY OF ALABAMA TOWARD IMMIGRANTS.

Sentiment of the people—Favor of the Legislature—Laws guarding industry—Mechanics—Agriculturists—Married women—Exemptions—Homesteads—Productiveness of the soil—Entry of public lands—Terms of the law—Information for pre-emptors, etc.

THERE have been no civil disorders in Alabama since the close of the war. Men of worth, from all sections of the Union, and all parts of the world, are cordially invited to make their homes among us by both political parties. The wheels of State government have never ceased to run smoothly, notwithstanding the changes of policy and the deep contrariety of political opinion. Governor Wm. H. Smith, who took his seat under the reconstruction laws of Congress, testified in a public speech, at a time when the passion of partisans was being fully aroused by an absorbing Presidential election, that the people of Alabama are law-abiding. Probably in no State of the Union—North, South, East or West—have fewer crimes occurred since the war than in Alabama.

In regard for public morality, in submission to existing laws, in courtesy to strangers, in solicitude for the kindest relations with the people of the North, in ardent desire for foreign immigration, in enterprising spirit, and in the industry of her people, Alabama challenges comparison with any other State in the Union. She holds nothing back in a spirit of chagrin or revenge; but invites every one to join in her destiny and share her advantages.

She knows that identity of interests produce identity of ideas and a harmony of action in all the walks of life.

With such views her Legislature have enacted laws for the peculiar encouragement of immigrants, and especially of laborers.

Mechanics have a lien upon the article they fabricate, for the payment of their labor.

Agricultural laborers are allowed a lien on the respective crops cultivated by them, to the extent of the value of such labor, whether it be rendered in consideration of money, wages, or for a share in the crops; such lien to attach from the planting of the crop and to be subordinate only to liens for rent of the land on which such crops are grown.

The laws exempt from taxation the buildings and machinery of iron furnaces, foundries, rolling mills, machine shops, nail and ax factories, tanneries and manufactories of leather goods, paper mills, glass-works, stove and earthenware factories, woollen, silk and cotton factories.

They exempt from execution for debt, property in the country, as a homestead for each head of the family, of the value of \$1,500, and in the cities a homestead of the value of \$2,500.

They guard the property of married women with scrupulous fidelity, and forbid the alienation of their separate estate for the husband's debts, even with their own consent.

They foster education by providing a thorough system of public schools, and by securing to the support of the schools the liberal revenue of \$760,000 per annum.

It must be kept in mind that many thousands of acres of Alabama lands are still open to pre-emption—many of them excellent pine lands with good subsoil of clay, upon which the scientific culture of Mr. Dickson has made two bales of cotton to the acre—others of them in the hills where the foot can not tread without trampling upon mines of untold wealth.

It is the desire of Alabama, and also the policy of the Federal Government, that these lands should be settled up with thrifty laborers.

Why should the man who lives by the sweat of his brow go to the Western wilds, away from the comforts of society, away from the haunts of civilized life, to a region where his work is interrupted for several months of the year, and where his wife and children are not able to assist him in outdoor employment, except for a short season; when here in the heart of an old country, convenient to markets, directly on great highways, he can find a home equally as cheap, more productive, and where the genial climate permits the year's labor to be distributed over all the months more equally, and to be borne by even the most delicate of the household?

It would seem that the emigrant who seeks the headwaters of the Mississippi and the Missouri, rather than the genial banks of the James, the Tennessee, the Alabama and the Tombigby, prefers frost to sunshine,

and a difficult to an easy market. Forty acres of land in the cotton belt of Alabama would make a fortune for an emigrant in a few years, if he were to cultivate them with the same diligence with which he cultivates his corn in the Northwest. Upon his forty acres of Western prairie he could make his fifty bushels of corn to the acre, sell it for 25 cents per bushel at his crib, and die poor, although he might pass life comfortably. On the same quantity of cotton land, the emigrant and his son can make, by skillful and laborious attention, his forty bales of cotton, and become independent in a few years.

For the benefit of emigrants who desire to enter homesteads in Alabama, it is important to give the facts connected with the mode of securing the advantages of the "Homestead Act."

That Act provides, that any citizen, or one who has taken the necessary steps to become such, or a widow, or the head of a family, or any person that has served fourteen days in the army or navy of the United States, or any person twenty-one years of age, and dependent upon themselves for a livelihood, may acquire title to a home of not more than 160 acres; but upon the following conditions: They must settle upon it and cultivate it for five consecutive years; a removal from it for six consecutive months vitiates the title, and the land reverts to the Government. Persons owning 160 acres can not enter land. Fees to be paid vary as the quantity to be entered, but in no case can the entire cost at entering, and payment to be made at the expiration of the five years for 160 acres, exceed $12\frac{1}{2}$ cents per acre.

Persons residing a great distance from the office, or who may, by reason of bodily infirmities, indigence, or other good cause, be prevented from a personal attendance at the office in Montgomery, can, by complying strictly with the following instructions, secure the land desired, at much less cost of money and time. Write to the Register of the Land Office, Montgomery, Alabama, describing the tract they wish to enter, giving number of section, township, and range, inclosing the fee of \$2, upon receipt of which the necessary examination will be made in the office, and if the entry can be admitted, the proper papers will be made out, and sent by mail, to the applicant, with full instructions how to proceed to secure his or her entry, together with the information of what amount of money will have to accompany the papers after their execution by the applicant, which in all cases must be before the Probate Judge of the county in which the applicant resides. Upon the return of the papers to the office at Montgomery the entry will be recorded, and the Receiver's receipt and certificate of the Register will be sent to the parties, which completes the entry.

Land lying within fifteen miles, on either side of a railroad having a grant of lands, can only be entered as homesteads as follows: The odd numbered sections can not be entered upon. If an entry is desired within the six mile limits of the railroad, 80 acres only can be had; if outside the six mile and within the fifteen mile limits, 160 may be had, at no greater cost than 80 acres inside the six mile limit, but only upon even numbered sections in both the cases above referred to. Outside the fifteen mile limits odd and even numbered sections may be entered upon alike.

Persons applying should remember that the "Act" requires the entry of a "compact body of land, according to the legal subdivision thereof." Hence, 40 acre lots, cornering only upon each other, can not be entered.

Land entered under the "Homestead Act" is not subject to taxation for five years from the date of entry, neither can the party entering dispose of it; any sale of it is regarded by the department as an abandonment of the claim, and the title reverts to the Government. If such sale be made before the title shall have been perfected by the five years residence upon it, and cultivation thereof, it can not be levied upon and sold for any debts contracted prior to the issuance of the patent, which patent can only be obtained at the expiration of the five years, and upon the certificates of two credible witnesses that the said applicant has resided there during the five years preceding the application for the patent.

RELATIONS OF ALABAMA TO THE COMMERCIAL WORLD.

Outlet for Western products—Fault of the Mississippi—Fault of the Sound route—The Coosa route—Mobile and Pensacola the gateways to the Gulf—Alabama the highway to South America, Panama, and the East—The Indies—The Gulf and the Mediterranean—The route to the East, etc.

It is demonstrated from what has been already said that the great expanse of country which is drained by the Mississippi and its tributaries can not afford to find an outlet, for the accumulating products which are now sixty-six and two-thirds per cent. below their actual worth, by the precarious water line of the lakes, nor by the costly railroad lines which seek to meet the deficiency of water communication.

These products are swelling in volume with the growth of the West—a growth unparalleled in human annals. The country whose waters flow down the Mississippi, embraces 1,700,000 square miles of territory. The population of this territory is increasing with wonderful rapidity. Between 1850 and 1860 Illinois doubled its population. In the last decades, the increase of population of the United States has been at the rate of $35\frac{1}{2}$ per cent., for each decade. The older States have stood still; the greater part of the percentage being Western gains. But even at a rate of 33 per cent., the territory of which we speak will have a population in 1940 of 120,000,000. The child is now living who will see this result.

The products of this vast region must necessarily seek an outlet by the water lines toward the Gulf. General Sypher, of Louisiana, a member of the 40th Congress, declared in the House of Representatives, in the fall of 1868, that grain was being shipped from St. Louis to New York, *via* New Orleans, at seventeen cents per bushel less than *via* Chicago and Buffalo, and to Liverpool at twenty cents less per bushel *via* New Orleans than *via* New York, and in one-third less time.

The facility offered by the Mississippi route, and its cheapness, will decide that as the popular one. But the outlet at the mouth of the Mississippi, is not competent for the amount of freights which the West can send even now to market.

The New Orleans *Picayune* in February, 1869, published the following fact:

“There is a deplorable state of affairs existing at the mouth of the river. Some large craft, steamships and sailing vessels, all loaded, are lying inside, unable to get to sea; while some three or four inbound steamships are lying aground upon the bar. The recent northerly winds have no doubt driven the water from the bar to some extent, but it is humiliating to reflect that the only passage by which vessels of heavy tonnage can leave or approach our city is so frequently blocked, that the wheels of commerce are thus abruptly stopped.”

Another outlet is even now demanded. It is being sought by means of a canal at English Turn, a short distance below New Orleans, by which the barges of the Mississippi may be towed into Lake Borgne, thence into Mississippi Sound, and thence through Grant's Pass into Mobile Bay. But this route subjects the barges at times to a boisterous sea. Without a barge system, this route would suffer from a transfer of grain from the boats which ply the Mississippi to those which are able to stand the rougher waters of the Sound.

It is demonstrated, therefore, that the Alabama Water Line, through.

the Coosa Canal, is a necessity, and that the growth of the West will force its construction. This line, as we have said, passes through the heart of Alabama. It has two natural mouths, one at Mobile Bay, and the other by means of an easily constructed and short canal, at Pensacola. Alabama is now negotiating with the State of Florida for the annexation of the portion of that State which is drained by the waters of Pensacola Bay.

This Alabama Water Line presents the grand highway for communication between the Gulf of Mexico and the great region which, in another life-time, will contain a population of 120,000,000.

Apart from such a water line, the State of Alabama presents a railroad line connecting the magnificent harbor of Pensacola with the navigable waters of the Tennessee. The port of Pensacola is the only one upon the Gulf which presents a commodious and practicable harbor for the heaviest shipping. There the mightiest men-of-war and the greatest merchant ships, coming from Panama, Rio Janeiro, Liverpool or Cadiz, may unload their cargoes upon the wharf, and receive directly into their holds the products of the West. There is presented also the shortest railroad line to the navigable waters of the great West. Thence the traveler goes due north by railroad to Elyton, in the heart of the mineral region of Alabama, and there diverges in either direction, through East Tennessee to Norfolk or New York, or through Louisville to the Northwest.

Alabama and Illinois, Mobile or Pensacola and Chicago, are destined to be the two great ventricles of the Mississippi Valley, through which the highway for defensive communication in war and commercial traffic in peace unites the Gulf and the Lakes.

It is seen at a glance how important is this outlet to the Gulf, as regards foreign commerce. At the gateway of Alabama, the products of not only Europe, but South America, the West Indies, and even the East Indies, meet the products of the West.

Professor Edward Fontaine, in an address before the Chicago Chamber of Commerce, said :

“The monument of Benton, in St. Louis, is a memorial worthy of the great advocate of a railroad to the Pacific; and he deserves the yet prouder granite shaft which it is proposed to rear to his memory where that road touches the loftiest crest of the Rocky Mountains. The statue represents him as pointing to the West, and exclaiming: “There is the East! There is India!” I hope that some advocate of an enterprise far more beneficial to your city than the trade of California and China, will deserve a monument at your hand; and that his statue will

stand among the tombs of your cherished dead and point to the South; and that this inscription, engraved upon it in letters of gold, will shine from generation to generation upon the sight of your posterity as a guiding light to your commerce. 'There is Ophir! There is the India of Columbus.' Look to the South! There are the Indies whose imperial treasures enriched old Spain; and there is the source from which England still obtains her wealth. That nation or city, whatever it may be, will be the wealthiest and most prosperous, whose manufacturers and merchants supply most extensively the demands of this El Dorado of the New World."

The gateways of the West, the most practicable ports of the Gulf, look out upon the India of Columbus. Mobile and Pensacola invite the tropical productions of the Caribbean Sea to exchange with the cereals of the West. The Central American States and Mexico, Venezuela, Brazil and the West Indies possess all the articles of commerce which the Western States need, and which they can not produce; while they can not make flour or bacon, and are destitute of iron, lead and hardware, cutlery, arms, ammunition, agricultural implements, and the hundreds of various kinds of Western produce and manufactures which they require. The Amazon empties directly with one great mouth into the equatorial current which flows against the whole eastern coast of the Western Hemisphere in its Northern course, and touches the shores of Brazil, the Guianas, Venezuela, New Granada, Costa Rica, Guatemala, Honduras, Mexico, Texas and Louisiana; and bears so strongly against the mouth of the Mississippi that it erodes the bottom of the ocean to the depth of more than 7000 feet at that point. A vessel can start from the mouth of the Amazon, and without unfurling a sail, can steer along this strong current which forms the Gulf stream, "with bare pole," directly to the mouth of Southwest Pass. Bottles thrown out at the mouth of the Amazon are always stranded by this current on Galveston Island, Terrebone parish, or some other parts of the coast of Texas or Louisiana. It receives the mouths of the Amazon, Orinoco, Magdalena, Rio Grande, Brazos and Mississippi, indicating the natural course of the tropical trade, and proving that the great Creator intended that the valleys of these rivers should interchange their products by their mouths, which He has singularly linked together.

In the winter of 1868-9 cargoes of coffee from Rio Janeiro were received at Mobile, shipped over the long line of the Mobile & Ohio Railroad, to St. Louis, and sold there for less than they could have been laid down at the same point by way of Baltimore and the lines connect-

ing Baltimore with the West. The same result would hold true of all other South American and West Indian products.

Not only do the ports of Alabama look out upon the India of Columbus, but they also look out upon the India which Columbus sought.

They look across the Isthmus of Darien toward the commerce of the Pacific. The Western Continent is a repetition of the Eastern. To the one the Gulf of Mexico is what the Mediterranean is to the other. The Isthmus of Darien bears the same relation to the new world which the Isthmus of Suez bears to the old. Across both lies the road to the Indies. When the caravans which followed the route marked out by the Crusaders, greeted the products of Europe with the riches of the Orient, upon the shores of the Mediterranean, the cities of that genial inland sea rose into beauty and magnificence. They gave arts and sciences to mankind, and broke with a rising sun through the gloom of the mediæval ages.

The discovery of the Cape of Good Hope gave a cheap water route to India, and destroyed the commerce of the Mediterranean cities.

Now, the Isthmus of Suez is cut by a ship canal, and the wealth of India will again flow through the Italian cities, if they will only stretch out their hands to grasp it. Now, also, the mission of Mr. Cushing to the Colombian Government, determines the cutting of the Isthmus of Darien, and the opening of India to the commerce of the Gulf.

The Pacific Railroad, with its great length and its constant interruptions from snow, for several months of the year, can not compete with the shipping which will pass from California through the Darien Canal, to exchange the products of the Orient with those of the Mississippi Valley. Why may not Pensacola become to the commercial cities which reach from the Gulf to Chicago, what Venice became to the Hanseatic League? Why will not Mobile become what Genoa was in the days of Columbus? Are these mere visions? Was Benton dreaming when he pointed across what he believed to be a "Great American Desert," and exclaimed: "There is the East—there is India?"

May not the people of Alabama, when they freight at Mobile the ships of our vast inland sea with the products of the great West and with the thousand commodities which may be made from her own prime products, exclaim: "There is the Ophir of the Bible—the India of Columbus—and that gateway to the Orient for which the nations of the Atlantic have been seeking a thousand years?"

STATISTICAL REGISTER.

CONSTITUTION OF ALABAMA.

PREAMBLE.

WE, The People of the State of Alabama, by our Representatives in Convention assembled, in order to establish justice, insure domestic tranquillity, provide for the common defense, promote the general welfare, and secure to ourselves and to our posterity the rights of life, liberty, and property, invoking the favor and guidance of Almighty God, do ordain and establish the following Constitution and form of government for the State of Alabama.

ARTICLE I.

DECLARATION OF RIGHTS.

That the great, general and essential principles of liberty and free government may be recognized and established, WE DECLARE :

SECTION 1. That all men are created equal ; that they are endowed by their Creator with certain inalienable rights ; that among these are life, liberty, and the pursuit of happiness.

SEC. 2. That all persons resident in this State, born in the United States, or naturalized, or who shall have legally declared their intention to become citizens of the United States, are hereby declared citizens of the State of Alabama, possessing equal civil and political rights and public privileges.

SEC. 3. That all political power is inherent in the people, and all free governments are founded on their authority, and instituted for their benefit ; and that, therefore, they have, at all times, an inherent right to change their form of government, in such manner as they may deem expedient.

SEC. 4. That no person shall be deprived of the right to worship God according to the dictates of his own conscience.

SEC. 5. That no religion shall be established by law.

SEC. 6. That any citizen may speak, write, and publish his sentiments on all subjects, being responsible for the abuse of that liberty.

SEC. 7. That the people shall be secure in their persons, houses, papers and possessions, from unreasonable seizures or searches, and that no warrant shall issue to search any place, or to seize any person or thing without probable cause, supported by oath or affirmation.

SEC. 8. That in all criminal prosecutions, the accused has a right to be heard by himself and counsel, or either ; to demand the nature and cause of the accusation ; to have a copy thereof ; to be confronted by the witnesses against him ; to have compulsory process for obtaining witnesses in his favor ; and in all prosecutions by indictment or information, a speedy public trial, by an impartial jury of the county

or district in which the offense was committed ; and that he shall not be compelled to give evidence against himself, or be deprived of his life, liberty or property, but by due process of law.

SEC. 9. That no person shall be accused or arrested, or detained, except in cases ascertained by law, and according to the forms which the same has prescribed ; and that no person shall be punished but by virtue of a law established and promulgated prior to the offense, and legally applied.

SEC. 10. That no person shall, for any indictable offense, be proceeded against criminally, by information, except in cases arising in the land and naval service, or in the militia when in actual service, or by leave of the court for oppressions or misdemeanor in office : *Provided*, That in cases of petit larceny, assault, assault and battery, affray, unlawful assemblies, vagrancy, and other misdemeanors, the General Assembly may, by law, dispense with a grand jury, and authorize such prosecutions and proceedings before justices of the peace, or such other inferior courts as may be by law established.

SEC. 11. That no person shall, for the same offense, be twice put in jeopardy of life or limb.

SEC. 12. That no person shall be debarred from prosecuting or defending, before any tribunal in the State, by himself, or counsel, any civil cause to which he is a party.

SEC. 13. That the right of trial by jury shall remain inviolate.

SEC. 14. That in prosecution for the publication of papers investigating the official conduct of officers, or men in public capacity, or when the matter published is proper for public information, the truth thereof may be given in evidence ; and that in all indictments for libel, the jury shall have the right to determine the law and the facts under the direction of the court.

SEC. 15. That all courts shall be open, that every person, for any injury done him in his lands, goods, person or reputation, shall have a remedy by due process of law ; and right and justice shall be administered without sale, denial or delay.

SEC. 16. That suits may be brought against the State, in such manner and in such courts as may be by law provided.

SEC. 17. That excessive fines shall not be imposed, or cruel punishment inflicted.

SEC. 18. That all persons shall, before conviction, be bailable by sufficient sureties, except for capital offenses when the proof is evident, or the presumption great. Excessive bail shall not, in any case, be required.

SEC. 19. The privilege of writ of *habeas corpus* shall not be suspended, except when necessary for public safety in times of rebellion or invasion.

SEC. 20. That treason against the State shall consist only in levying war against it, or adhering to its enemies, giving them aid and comfort ; and that no person shall be convicted of treason, except on the testimony of two witnesses to the same overt act, or his own confession in open court.

SEC. 21. That no person shall be attainted of treason by the General Assembly ; and that no conviction shall work corruption of blood or forfeiture of estate.

SEC. 22. That no person shall be imprisoned for debt.

SEC. 23. That no power of suspending laws shall be exercised, except by the General Assembly, or by its authority.

SEC. 24. That no *ex post facto* law, or any law impairing the obligation of contracts, shall be made.

SEC. 25. That private property shall not be taken or applied for public use, unless

[III]

just compensation be made therefor; nor shall private property be taken for private use, or for the use of corporations, other than municipal, without the consent of the owner: *Provided, however,* That laws may be made securing to persons or corporations, the right of way over the lands of either persons or corporations, and for works of internal improvement, the right to establish depots, stations, and turnouts, but just compensation shall, in all cases, be first made to the owner.

SEC. 26. That all navigable waters shall remain forever public highways, free to the citizens of the State, and of the United States, without tax, impost or toll imposed; and that no tax, toll, impost or wharfage shall be demanded or received from the owner of any merchandise or commodity, for the use of the shores, or any wharf erected on the shores, or in, or over the waters of any navigable stream, unless the same be expressly authorized by the General Assembly.

SEC. 27. That the citizens have a right, in a peaceable manner, to assemble together for the common good, and to apply to those invested with the power of government, for redress of grievances, or other purposes, by petition, address or remonstrance.

SEC. 28. That every citizen has a right to bear arms in defense of himself and the State.

SEC. 29. That no person who conscientiously scruples to bear arms shall be compelled to do so, but may pay an equivalent for personal service.

SEC. 30. That no standing army shall be kept up without the consent of the General Assembly; and, in that case, no appropriation for its support shall be made for a longer term than one year, and the military shall, in all cases, and at all times, be in strict subordination to the civil power.

SEC. 31. That no soldier shall, in time of peace, be quartered in any house, without the consent of the owner; or in time of war, but in a manner to be prescribed by law.

SEC. 32. That no title of nobility, or hereditary distinction, privilege, honor, or emolument, shall ever be granted or conferred in this State; that no property qualification shall be necessary to the election to, or holding of any office in this State and that no office shall be created, the appointment to which shall be for a longer time than during good behavior.

SEC. 33. That emigration from the State shall not be prohibited; and that no citizen shall be exiled.

SEC. 34. That temporary absence from the State shall not cause a forfeiture of residence once obtained.

SEC. 35. [That no form of slavery shall exist in this State]; and there shall be no involuntary servitude, otherwise than for the punishment of crime, of which the party shall have been duly convicted.

SEC. 36. The right of suffrage shall be protected by laws, regulating elections, and prohibiting, under adequate penalties, all undue influences from power, bribery, tumult or other improper conduct.

SEC. 37. That this State has no right to sever its relations to the Federal Union, or to pass any law in derogation of the paramount allegiance of the citizens of this State to the government of the United States.

SEC. 38. That this enumeration of certain rights shall not impair or deny others retained by the people.

[IV]

ARTICLE II.

STATE AND COUNTY BOUNDARIES.

SEC. 1. The boundaries of this State are established and declared to be as follows—that is to say: Beginning at the point where the thirty-first degree of north latitude crosses the Perdido river; thence east to the western boundary line of the State of Georgia; thence along said line to the southern boundary line of the State of Tennessee, thence west along the southern boundary line of the State of Tennessee, crossing the Tennessee river, and on to the second intersection of said river, by said line; thence up said river to the mouth of Big Bear Creek; thence by a direct line to the northwest corner of Washington county, in this State, as originally formed; thence southerly, along the line of the State of Mississippi, to the Gulf of Mexico; thence eastwardly, including all islands within six leagues of the shore, to the Perdido river, and thence up the said river to the beginning.

SEC. 2. The General Assembly may, by a two-thirds vote of both houses thereof, arrange and designate boundaries for the several counties of this State, which boundaries shall not be altered, except by a like vote. But no new counties shall be hereafter formed of less extent than six hundred square miles; and no existing county shall be reduced to less extent than six hundred square miles; and no new county shall be formed which does not contain a sufficient number of inhabitants to entitle it to one representative under the ratio of representation existing at the time of its formation, or, unless the county or counties from which it is taken shall be left with the required number of inhabitants entitling such county or counties to separate representation.

ARTICLE III.

DISTRIBUTION OF POWERS OF GOVERNMENT.

SEC. 1. The powers of the government of the State of Alabama shall be divided into three distinct departments, each of which shall be confided to a separate body of magistracy, to-wit: Those which are legislative, to one; those which are executive, to another; and those which are judicial, to another.

SEC. 2. No person, or collection of persons, being of one of those departments, shall exercise any power properly belonging to either of the others, except in the instances hereinafter expressly directed and permitted.

ARTICLE IV.

LEGISLATIVE DEPARTMENT.

SEC. 1. The legislative power of this State shall be vested in a General Assembly, which shall consist of a Senate and House of Representatives.

SEC. 2. The style of the laws of this State shall be: "Be it enacted by the General Assembly of Alabama." Each law shall contain but one subject, which shall be clearly expressed in its title; and no law shall be revised or amended unless the new act contain the entire act revised, or the section or sections amended; and the section or sections so amended shall be repealed.

SEC. 3. Senators and Representatives shall be elected by the qualified electors, on the Tuesday after the first Monday in November. The term of office of the Senators shall be four years, and that of the Representatives two years, commencing on the day after the general election.

[v.]

SEC. 4. No person shall be a Representative unless he is eligible as an elector to vote for members of the General Assembly.

SEC. 5. No person shall be a Senator, unless he be eligible as an elector to vote for members of the General Assembly, and shall be twenty-seven years of age, and shall have resided for two years within the State, and for the last year thereof within the district for which he shall be chosen.

SEC. 6. The House of Representatives, when assembled, shall choose a Speaker, and its other officers; and the Senate shall choose a President, in the absence of the Lieutenant-Governor, and its other officers: each House shall judge of the qualifications, elections and returns of its own members, but a contested election shall be determined in such manner as shall be directed by law. The President of the Senate and the Speaker of the House of Representatives shall remain in office until their successors are elected and qualified.

SEC. 7. A majority of each house shall constitute a quorum to do business, but a smaller number may adjourn from day to day, and may compel the attendance of absent members, in such manner and under such penalties as each house may provide.

SEC. 8. Each house may determine the rules of its own proceedings, punish members for disorderly conduct, and, with the consent of two-thirds, expel a member; but not a second time for the same cause; and shall have all other powers necessary for a branch of the Legislature of a free and independent State.

SEC. 9. Each house, during the session, may punish by imprisonment, any person not a member, for disrespectful or disorderly behavior in its presence, or obstructing any of its proceedings: *Provided*, That such imprisonment shall not, at any time, exceed forty-eight hours.

SEC. 10. Each house shall keep a journal of its proceedings, and cause the same to be published immediately after its adjournment, excepting such parts as in its judgment may require secrecy, and the yeas and nays of the members of either house, on any question, shall, at the desire of one-tenth of the members present, be entered on the journals. Any member of either house shall have liberty to dissent from, or protest against, any act or resolution, which he may think injurious to the public or an individual, and have the reasons of his dissent entered on the journals.

SEC. 11. Members of the General Assembly, shall, in all cases, except treason, felony or breach of the peace, be privileged from arrest; and they shall not be subject to any civil process during the session of the General Assembly, nor for fifteen days next before the commencement and after the termination of each session.

SEC. 12. When vacancies occur in either house, the Governor, or the person exercising the powers of the Governor, shall issue writs of elections to fill such vacancies.

SEC. 13. The doors of each house shall be open, except on such occasions as in the opinion of the house, may require secrecy.

SEC. 14. Neither house shall, without the consent of the other, adjourn for more than three days, nor to any place than that in which they may be sitting.

SEC. 15. Bills may originate in either house, and be amended, altered or rejected by the other; but no bill shall have the force of law, until on three several days it be read in each house, and free discussion be allowed thereon, unless in case of urgency, four-fifths of the house in which the bill shall be pending, may deem it expedient to dispense with this rule. And every bill, having passed both houses, shall be signed by the Speaker and President of their respective houses: *Provided*, That all

[VI]

bills for raising revenue shall originate in the House of Representatives, but the Senate may amend or reject them as other bills.

SEC. 16. Every bill or resolution having the force of law, to which the concurrence of both houses of the General Assembly may be necessary, except on a question of adjournment, which shall have passed both houses, shall be presented to the Governor, and if he approve, he shall sign it; if not, he shall return it with his objections, to the house in which it shall have originated, who shall enter the objections at large on the journals, and proceed to reconsider it. If after such reconsideration, a majority of the whole number of members of that house shall agree to pass it, it shall be sent, together with the objections, to the other house, by which it shall be reconsidered, and if approved by a majority of the whole number of members of that house, it shall have the same effect as if it had been signed by the Governor; but in all such cases, the votes of both houses shall be taken by yeas and nays, and the names of persons voting for and against the bill or resolution, shall be entered on the journals of both houses respectively. If the bill or resolution shall not be returned by the Governor within five days (Sundays excepted) after it shall have been presented to him, it shall have the same force and effect as if he had signed it, unless the General Assembly, by its adjournment, prevent its return, in which case it shall not be a law.

SEC. 17. Every order, resolution or vote, to which the concurrence of both houses may be necessary (except on questions of adjournment, and for bringing on elections by the two houses), shall be presented to the Governor, and before it shall take effect, be approved by him, or being disapproved, shall be re-passed by both houses, according to the rules and limitations prescribed in the case of bills.

SEC. 18. Each member of the General Assembly shall receive from the public treasury such compensation for his services as may be prescribed by law; but no increase of compensation shall take effect during the session at which such increase shall have been made.

SEC. 19. No Senator or Representative shall, during the term for which he shall have been elected, be appointed to any civil office of profit under this State, which shall have been created, or the emoluments of which shall have been increased during such term, except such office as may be filled by election by the people.

SEC. 20. No person who holds any lucrative office under the United States, or under this State, or any other State or government (except postmasters, officers in the militia to whose office no annual salary is attached, justices of the peace, members of the court of county commissioners, notaries public, and commissioners of deeds); no person who has been convicted of having given or offered any bribe to procure his election to any office; no person who has been convicted of bribery, forgery, perjury, or other high crime, or misdemeanor, which may be by law declared to disqualify him; and no person who has been a collector, or holder of any public moneys, and has failed to account for and pay over to the treasury all sums for which he may be by law accountable, shall be eligible to the General Assembly.

SEC. 21. The General Assembly shall meet annually, on such day as may be by law prescribed, and shall not remain in session longer than thirty days, except by a vote of two-thirds of each House.

SEC. 22. In all elections by the General Assembly, the members shall vote *viva voce*, and the votes shall be entered on the journals.

SEC. 23. All State officers may be impeached for any misdemeanor in office, but judgment shall not extend further than removal from office, and disqualification to

[VII]

hold office under the authority of this State. The party impeached, whether convicted or not, shall be liable to indictment, trial and judgment, according to law.

SEC. 24. The House of Representatives shall have the sole power of preferring impeachment. All impeachments shall be tried by the Senate; the Senators, when sitting for that purpose, shall be on oath or affirmation; and no person shall be convicted under an impeachment without the concurrence of two-thirds of the Senators present.

SEC. 25. It shall be the duty of the General Assembly to pass such laws as may be necessary and proper to decide differences by arbitrators, to be appointed by the parties who may choose that mode of adjustment.

SEC. 26. It shall be the duty of the General Assembly, from time to time, as circumstances may require, to frame and adopt a penal code founded on principles of reformation.

SEC. 27. It shall be the duty of the General Assembly, within five years after the adoption of this Constitution, and within every subsequent period of ten years, to make provision by law for the revision, digesting and promulgation of all the public statutes of this State, both civil and criminal.

SEC. 28. The General Assembly shall have power to pass such penal laws as they may deem expedient, to suppress the evil practice of dueling.

SEC. 29. It shall be the duty of the General Assembly to regulate by law the cases in which deductions shall be made from the salaries of public officers for neglect of duty in their official capacities, and the amount of such deductions.

SEC. 30. Divorces from the bonds of matrimony shall not be granted but in the cases by law provided for, and by suit in chancery; but decisions in chancery for divorce shall be final, unless appealed from in the manner prescribed by law, within three months from the date of the enrollment thereof.

SEC. 31. No money shall be drawn from the treasury but in pursuance of an appropriation made by law; and a regular statement and account of the receipts and expenditures of all public moneys shall be published annually, in such manner as may be by law directed.

SEC. 32. The General Assembly shall not borrow or raise money on the credit of this State, except for purposes of military defense against actual or threatened invasion, rebellion or insurrection, without the concurrence of two-thirds of the members of each house; nor shall the debts or liabilities of any corporation, person or persons, or other States, be guaranteed, nor any money, credit or other thing be loaned or given away, except by a like concurrence of each house; and the votes shall, in each case, be taken by the yeas and nays and be entered on the journals.

SEC. 33. The State shall not engage in works of internal improvement; but its credit in aid of such may be pledged by the General Assembly on undoubted security, by a vote of two-thirds of each House of the General Assembly.

SEC. 34. It shall be the duty of the General Assembly to make adequate provisions in each county for the maintenance of the poor of this State.

SEC. 35. Any citizen of this State who shall, after the adoption of this Constitution, either in or out of this State, fight a duel with deadly weapons, or send, or accept a challenge so to do, or act as a second, or knowingly aid or assist in any manner those thus offending, shall be incapable of holding any office under this State.

SEC. 36. The General Assembly shall not have power to authorize any municipal corporation to pass any laws contrary to the general laws of the State, nor to levy a

[VIII]

tax on real and personal property to a greater extent than two percentum of the assessed value of such property.

SEC. 37. In the event of annexation of any foreign territory to this State, the General Assembly shall enact laws extending to the inhabitants of the acquired territory, all the rights and privileges which may be required by the terms of the acquisition, anything in this Constitution to the contrary notwithstanding.

ARTICLE V.

EXECUTIVE DEPARTMENT.

SEC. 1. The Executive Department shall consist of a Governor, Lieutenant-Governor, Secretary of State, Auditor, Treasurer, and Attorney-General, who shall be chosen by the electors of the State, at the time and places at which they shall vote for Representatives.

SEC. 2. The Governor, Lieutenant-Governor, Secretary of State, Treasurer, and Attorney-General shall hold their offices for the term of two years, and the Auditor for the term of four years.

SEC. 3. The returns of every election for the officers named in the preceding section, shall be sealed up and transmitted to the seat of Government, by the returning officers, directed to the presiding officer of the Senate, who, during the first week of the session, shall open and publish the same in the presence of a majority of the members of the General Assembly; the person having the highest number of votes shall be declared duly elected, but if two or more shall be highest and equal in votes for the same office, one of them shall be chosen by joint vote of both houses. Contested elections for executive officers shall be determined by both houses of the General Assembly, in such manner as shall be prescribed by law.

SEC. 4. The supreme executive power of this State shall be vested in the Governor.

SEC. 5. He shall take care that the laws are faithfully executed.

SEC. 6. He may require information in writing, from the officers in the executive department, upon any subject relating to the duties of their respective offices.

SEC. 7. He shall communicate at every session, by message to the General Assembly, the condition of the State, and recommend such measures as he shall deem expedient.

SEC. 8. He may, on extraordinary occasions, convene the General Assembly by proclamation, and shall state to both houses, when assembled, the purposes for which they have been convened.

SEC. 9. In case of disagreement between the two houses, in respect to the time of adjournment, he shall have power to adjourn the General Assembly to such time as he may think proper, but not beyond the regular meetings thereof.

SEC. 10. He shall be commander-in-chief of the military and naval forces of the State, except when they shall be called into the service of the United States.

SEC. 11. He shall have power after conviction, to grant reprieves, commutations and pardons for all offenses (except treason and cases of impeachment), upon such conditions as he may think proper, subject, however, to such regulations as to the manner of applying for pardons as may be prescribed by law; but such pardons shall not relieve from civil or political disability. Upon conviction of treason, he may suspend the execution of the sentence, and report the same to the General Assembly at the next meeting, when the General Assembly shall either pardon, commute the sentence, direct its execution, or grant further reprieve. He shall communicate to the General Assembly at every regular session, each case of reprieve,

commutation, or pardon granted, stating the name and crime of the convict, the sentence, its date, and the date of the commutation, pardon or reprieve, with his reasons therefor.

SEC. 12. There shall be a Great Seal of the State, which shall be kept and used by the Governor officially, and the seal heretofore in use, shall continue to be the Great Seal of the State until another shall have been adopted by the General Assembly.

SEC. 13. All grants and commissions shall be issued in the name and by the authority of the State of Alabama, sealed with the Great Seal, signed by the Governor, and countersigned by the Secretary of State.

SEC. 14. No member of Congress, or other person, holding office under the authority of this State, or of the United States, shall execute the office of Governor, except as herein provided.

SEC. 15. In case of the death, impeachment, resignation, removal, or other disability of the Governor, the powers and duties of the office, for the residue of the term, or until he shall be acquitted, or the disability removed, shall devolve upon the Lieutenant-Governor.

SEC. 16. The Lieutenant-Governor shall be President of the Senate, but shall vote only when the Senate is equally divided, and in case of his absence or impeachment, or when he shall exercise the office of Governor, the Senate shall choose a president *pro tempore*.

SEC. 17. If the Lieutenant-Governor, while executing the office of Governor, shall be impeached, displaced, resign or die, or otherwise become incapable of performing the duties of the office, the President of the Senate shall act as Governor until the vacancy is filled or the disability removed; and if the President of the Senate for any of the above causes shall be rendered incapable of performing the duties pertaining to the office of Governor, the same shall devolve upon the Speaker of the House of Representatives.

SEC. 18. Should the office of Secretary of State, Auditor, Treasurer, or Attorney-General become vacant from any of the causes specified in the fifteenth section of this article, the Governor shall fill the vacancy until the disability is removed or a successor elected and qualified. Every such vacancy shall be filled by election at the first general election that occurs more than thirty days after it shall have occurred, and the person chosen shall hold the office for the full term fixed in the second section of this article.

SEC. 19. The officers mentioned in this article shall, at stated times, receive for their services a compensation to be established by law, which shall neither be increased or diminished during the period for which they shall have been elected.

SEC. 20. The officers of the Executive Department and of the public institutions of the State, shall, at least five days preceding each regular session of the General Assembly, severally report to the Governor, who shall transmit such reports with his message to the General Assembly.

SEC. 21. A Sheriff shall be elected in each county by the qualified electors thereof, who shall hold his office for the term of three years, unless sooner removed, and shall not be eligible to serve either as principal or deputy for any two successive terms. Vacancies in the office of Sheriff shall be filled by the Governor as in other cases; and the person appointed shall continue in office until the next general election in the county for Sheriff, as by law provided.

ARTICLE VI.

JUDICIAL DEPARTMENT.

SEC. 1. The judicial power of the State shall be vested in the Senate sitting as a Court of Impeachment, a Supreme Court, Circuit Courts, Chancery Courts, Courts of Probate, such inferior Courts of Law and Equity to consist of not more than five members, as the General Assembly may from time to time establish, and such persons as may be by law invested with powers of a judicial nature.

SEC. 2. Except in cases otherwise directed in the Constitution, the Supreme Court shall have appellate jurisdiction only, which shall be co-extensive with the State, under such restrictions and regulations not repugnant to this Constitution, as may from time to time be prescribed by law: *Provided*, That said court shall have power to issue writs of injunction, mandamus, habeas corpus, quo-warranto, and such other remedial and original writs as may be necessary to give it a general superintendence and control of inferior jurisdiction.

SEC. 3. The Supreme Court shall be held at the seat of government, but if that shall have become dangerous from an enemy, or from disease, it may adjourn to a different place.

SEC. 4. The State shall be divided by the General Assembly into convenient circuits, each of which shall contain not less than three nor more than eight counties; and for each circuit there shall be chosen a Judge, who shall, after his election or appointment, reside in the circuit for which he shall have been chosen.

SEC. 5. The Circuit Court shall have original jurisdiction in all matters, civil and criminal, within the State, not otherwise excepted in the Constitution, but in civil cases only when the matter or sum in controversy exceeds fifty dollars: *Provided*, however, That the Circuit Court shall have equity jurisdiction concurrent with the Courts of Chancery in all cases for divorce, and cases in which the value of the matter in controversy does not exceed the sum of five thousand dollars.

SEC. 6. A Circuit Court shall be held in each county in the State at least twice in every year, and the judges of the several circuits may hold courts for each other when they deem it expedient, and shall do so when directed by law: *Provided*, That the judges of the several Circuit Courts shall have power to issue writs of injunction returnable into Courts of Chancery.

SEC. 7. The General Assembly shall have power to establish a Court or Courts of Chancery with original and appellate jurisdiction. The State shall be divided by the General Assembly into convenient Chancery Divisions, and the Divisions into Districts; and for each Division there shall be a Chancellor, who shall, after his election or appointment, reside in the Division for which he shall have been elected or appointed.

SEC. 8. A Chancery Court shall be held in each county at a place therein to be fixed by law, and the Chancellors may hold courts for each other, when they deem it expedient.

SEC. 9. The General Assembly shall have power to establish in each county within the State a Court of Probate, with general jurisdiction for the granting of letters testamentary and of administration, and for orphans' business; and the General Assembly may confer on the said courts, jurisdiction of contracts for labor, and order frequent sessions for that purpose.

SEC. 10. The Judges of the Supreme Court, Circuit Courts, and Courts of Chan-

cery, shall, at stated times, receive for their services a compensation which shall not be diminished during their continuance in office; but they shall receive no fees or perquisites, nor hold any office (except judicial offices) of profit or trust under this State, or the United States, during the term for which they have been elected, nor under any other power during their continuance in office.

SEC. 11. Judges of the Supreme Court, and chancellors, judges of the Circuit and Probate Courts, and of such other inferior courts as may be by law established, shall be elected by the qualified electors of the respective counties, cities, towns or districts, for which said courts may be established, on the Tuesday after the first Monday in November of each year, or such other day as may be by law prescribed. Vacancies in the office of the Circuit judge, judge of Probate, or judge of any other inferior court established by law, shall be filled by the Governor; and the person appointed by him shall hold office until the next election day appointed by law for election of judge, and until his successor shall have been elected and qualified.

SEC. 12. The judges of the several Courts of this State shall hold their office for the term of six years; and the right of any judge to hold his office for the full term hereby prescribed, shall not be affected by any change hereafter made by law in any Circuit or District, or in the mode or time of election; but for any willful neglect of duty, or any other reasonable cause which shall not be a sufficient ground of impeachment, the Governor shall remove any judge on the address of two-thirds of each house of the General Assembly: *Provided*, That the cause or causes for which said removal may be required, shall be stated at length in such address, and entered on the journals of each house: *And provided further*, That the judge intended to be removed shall be notified of such cause or causes, and shall be admitted to a hearing in his own defense, before any vote for such address; and in all such cases the vote shall be taken by yeas and nays, and be entered on the journal of each house respectively.

SEC. 13. A competent number of justices and constables shall be elected in and for each county by the qualified electors thereof, who shall hold office during such terms as may be prescribed by law. Said justices shall have jurisdiction in all civil cases wherein the amount in controversy does not exceed one hundred dollars. In all cases tried before such justices the right of appeal shall be secured by law: *Provided*, that notaries public appointed according to law, shall be authorized and required to exercise, throughout their respective counties, all the powers and jurisdiction of justices of the peace.

SEC. 14. The judges of the Supreme Court shall, by virtue of their offices, be conservators of the peace throughout the State; as also the judges of the Circuit Courts within their respective circuits, and the judges of the inferior courts within their respective counties.

SEC. 15. The clerk of the Supreme Court shall be appointed by the judges thereof; registers in Chancery, by the chancellors of the Divisions; and all the clerks and registers so appointed shall be removed by the appointing power for cause to be placed on the records of the court.

SEC. 16. The Attorney-General shall reside at the seat of government, and shall be the law officer of the State. During the session of the General Assembly, he shall furnish to the committees of either house, when required, drafts of bills and written opinions upon any matter under consideration of the committees, and shall perform such other duties as may be required of him by law.

SEC. 17. A Solicitor shall be elected in each county in this State, by the qualified

[XII]

electors of such county, who shall reside in the county for which he is elected, and perform such duties as may be required of him by law. He shall hold office for a term of four years, and in case of vacancy, such vacancy shall be filled by the judge of the Circuit until his successor is elected and qualified.

SEC. 18. Clerks of the Circuit Court, and such inferior courts as may be by law established, shall be elected by the qualified electors in each county, for the term of six years, and may be removed from office for cause, and in such manner as may be by law prescribed. Vacancies in the office of clerk shall be filled by the judge of the Court, until the next general election, and until a successor shall be elected and qualified: *Provided*, That the General Assembly shall have power to annex the duties of clerk to the office of judge of any of the inferior courts by law established.

SEC. 19. The style of all processes shall be "*The State of Alabama*," and all prosecutions shall be carried on in the name and by the authority of the State of Alabama, and shall conclude "against the peace and dignity of the same."

ARTICLE VII.

ELECTIONS.

SEC. 1. In all elections by the people, the electors shall vote by ballot.

SEC. 2. Every male person born in the United States, and every male person who has been naturalized, or who has legally declared his intention to become a citizen of the United States, twenty-one years old or upward, who shall have resided in this State six months next preceding the election, and three months in the county in which he offers to vote, except as hereinafter provided, shall be deemed an elector: *Provided*, That no soldier, or sailor, or marine, in the military or naval service of the United States, shall hereafter acquire a residence by reason of being stationed on duty in this State.

SEC. 3. It shall be the duty of the General Assembly to provide, from time to time, for the registration of all electors; but the following classes of persons shall not be permitted to register, vote, or hold office: 1st, Those who, during the late rebellion, inflicted, or caused to be inflicted, any cruel or unusual punishment upon any soldier, sailor, marine, employe or citizen of the United States, or who, in any other way, violated the rules of civilized warfare. 2d, Those who may be disqualified from holding office by the proposed amendment to the Constitution of the United States, known as "Article XIV," and those who have been disqualified from registering to vote for delegates to the Convention to frame a Constitution for the State of Alabama, under the act of Congress, "to provide for the more efficient government of the rebel States," passed by Congress March 2, 1867, and the acts supplementary thereto, except such persons as aided in the reconstruction proposed by Congress, and accept the political equality of all men before the law: *Provided*, That the General Assembly shall have power to remove the disabilities incurred under this clause. 3d, Those who shall have been convicted of treason, embezzlement of public funds, malfeasance in office, crime punishable by law with imprisonment in the penitentiary, or bribery. 4th, Those who are idiots or insane.

SEC. 4. All persons, before registering, must take and subscribe the following oath: I, —, do solemnly swear (or affirm) that I will support and maintain the Constitution and laws of the United States, and the Constitution and laws of the State of Alabama; that I am not excluded from registering by any of the clauses in Sec. 3, Article Constitution of the State of Alabama; that I will never

countenance or aid in the secession of this State from the United States; that I accept the civil and political equality of all men; and agree not to attempt to deprive any person or persons, on account of race, color, or previous condition, of any political or civil right, privilege, or immunity, enjoyed by any other class of men; and furthermore, that I will not in any way injure, or countenance in others any attempt to injure any person or persons, on account of past or present support of the government of the United States, the laws of the United States, or the principle of the political and civil equality of all men, or for affiliation with any political party.

SEC. 5. Electors shall, in all cases, except treason, felony, or breach of the peace, be privileged from arrest and civil process during their attendance at elections, and in going to and returning from the same.

SEC. 6. It shall be the duty of the General Assembly, to enact adequate laws giving protection against the evils arising from the use of intoxicating liquors at elections.

SEC. 7. Returns of elections for all civil officers elected by the people, who are to be commissioned by the Governor, and also for the members of the General Assembly, shall be made to the Secretary of State.

ARTICLE VIII.

REPRESENTATION.

SEC. 1. The House of Representatives shall consist of not more than one hundred members, who shall be apportioned by the General Assembly among the several counties of the State, according to the number of inhabitants in them respectively; and to this end the General Assembly shall cause an enumeration of all the inhabitants of the State to be made in the year 1875, and every ten years thereafter, and shall make an apportionment of the representatives among the several counties at the first regular session after each enumeration; which apportionment, when made, shall not be subject to alteration until after the next census shall have been taken: *Provided*, That each county shall be entitled to at least one representative; *And provided, further*, That when two or more adjoining counties shall each have a residuum, or fraction over and above the ratio then fixed by law, which fractions, when added together, equal, or exceed that ratio, in that case the county having the largest fraction shall be entitled to one additional representative.

SEC. 2. Until the General Assembly shall make an apportionment of the representatives among the several counties, after the first enumeration made as herein provided, the counties of Autauga, Baldwin, Bibb, Blount, Butler, Calhoun, Clay, Clarke, Cherokee, Cleburne, Crenshaw, Choctaw, Coffee, Conecuh, Coosa, Covington, Dale, DeKalb, Elmore, Fayette, Henry, Jefferson, Lauderdale, Limestone, Marshall, Marion, Monroe, Morgan, Pike, Randolph, St. Clair, Shelby, Walker, Washington and Winston, shall have one representative each; the counties of Chambers, Franklin, Greene, Hale, Jackson, Lee, Lawrence, Macon, Pickens, Russell, Talladega, Tallapoosa, and Tuscaloosa, shall be entitled to two representatives each; the counties of Barbour, Bullock, Lowndes, Madison, Marengo, Perry, Sumter, and Wilcox, shall be entitled to three representatives each; the counties of Dallas, Mobile, and Montgomery, shall be entitled to five representatives each: *Provided*, That in the formation of new counties the General Assembly may apportion to each its proper representation.

SEC. 3. The whole number of Senators shall be not less than *one-fourth* or more than *one-third* of the whole number of representatives; and it shall be the duty of

[XII]

electors of such county, who shall reside in the county for which he shall perform such duties as may be required of him by law. He shall, and to divide term of four years, and in case of vacancy, such vacancy shall be filled, which districts judge of the Circuit until his successor is elected and qualified of inhabitants, and

SEC. 18. Clerks of the Circuit Court, and such inferior judges, that no county shall be established, shall be elected by the qualified electors in each county entirely by a county six years, and may be removed from office for cause at: *And provided, further,* by law prescribed. Vacancies in the office of clerk shall be filled and changed until after the next election of the Court, until the next general election, and

qualified: *Provided, That* the General Assembly, when apportionment, elections shall be held of clerk to the office of judge of any of the counties Senators elected, when convened

SEC. 19. The style of all processes shall be in the name of the General Assembly, shall be divided by lot into sections shall be carried on in the name of the seats of the Senators of the first class shall be held, and shall conclude "against" two years, and those of the second class at the next election, so that (except as above provided,) the same shall be chosen biennially.

SEC. 1. In all elections the General Assembly shall divide the State into senatorial districts

SEC. 2. Every male white person who has been naturalized in the United States six months before the election, and who has been for one year before the election, shall be qualified to vote in the election of Senators. *Provided, That* the General Assembly shall divide the State into senatorial districts as follows: 1st District, 1st, Franklin and Lawrence; 2d, Morgan, Blount, Win-
3d, Walker, Jefferson and St. Clair; 4th, Madison; 5th, Jackson, Marshall and DeKalb; 6th, Chero-
7th, Talladega and Clay; 8th, Shelby and Bibb; 9th, Chambers, Randolph and
10th, Tallapoosa; 11th, Chambers, Randolph and Tallapoosa; 12th, Lee; 13th, Lee; 14th, Macon; 15th, Russell;
16th, Barbour; 17th, Barbour; 18th, Autauga and Elmore; 19th, Montgomery; 20th, Dallas; 21st, Dallas; 22d, Perry; 23d, Hale; 24th, Greene and Pickens;
25th, Marengo; 26th, Marengo; 27th, Choctaw, Clark and Washington; 28th, Mo-
29th, Monroe and Baldwin; 30th, Wilcox; 31st, Butler and Conecuh; 32d, Crenshaw and Pike; 33d, Coffee, Dale and Henry.

SEC. 3. Until a new apportionment of representative to the Congress of the United States shall have been made, the Congressional District shall remain as stated in the Revised Code of Alabama, and after each new apportionment, the General Assembly shall divide the State into as many districts as it is allowed representatives in Congress, making such Congressional Districts as nearly equal in the number of inhabitants as may be.

ARTICLE IX.

TAXATION.

SEC. 1. All taxes levied on property in this State, shall be assessed in exact proportion to the value of such property: *Provided, however,* That the General Assembly may levy a poll-tax not to exceed one dollar and fifty cents on each poll, which shall be applied exclusively in aid of the public school fund.

SEC. 2. No power to levy taxes shall be delegated to individuals or private corporations.

ARTICLE X.

MILITIA.

SEC. 1. All able-bodied male inhabitants of this State, between the ages of eighteen years and forty-five years, who are citizens of the United States, or who have declared their intention to become citizens of the United States, shall be liable to military duty in the militia of this State; but all citizens of any denomination what-

ho, from scruples of conscience, may be averse to bearing arms, shall be herefrom upon such conditions as may be prescribed by law.

The General Assembly shall provide for the organizing, arming, equipping of the militia, and for paying the same, when called into active service in the manner as it shall deem expedient, not incompatible with the laws of

9. of the militia shall be elected or appointed and commissioned in the manner to be provided by the General Assembly.

10. The Governor shall be commander-in-chief of the army and navy of this State, and shall have the power to call forth the militia to execute the laws, to suppress riots, and to repel invasion.

11. The Governor shall nominate, and by and with the consent of the Senate, one Major-General and three Brigadier-Generals: the Adjutant-General, and other staff-officers to the commander-in-chief, shall be appointed by the Governor, and their commissions shall expire with the Governor's term of service. No commissioned officer shall be removed from office except by the Senate, on the recommendation of the Governor, stating the grounds on which such removal is recommended, or by the decision of a court-martial pursuant to law.

Sec. 6. The militia may be divided into two classes, to be designated as "volunteer militia" and "reserve militia," in such manner as shall be provided by law.

Sec. 7. The militia shall, in all cases, except felony, treason, or breach of the peace, be privileged from arrest during their attendance at musters and elections of officers, and in going to and returning from the same.

Sec. 8. The officers and men commissioned and organized, shall not be entitled to, or receive any pay, rations, or emoluments when not in active service.

ARTICLE XI.

EDUCATION.

Sec. 1. The common schools, and other educational institutions of the State, shall be under the management of a Board of Education, consisting of a Superintendent of Public Instructions, and two members from each Congressional District.

The Governor of the State shall be *ex officio* a member of the Board, but shall have no vote in its proceedings.

Sec. 2. The Superintendent of Public Instruction shall be President of the Board of Education, and have the casting vote in case of a tie; he shall have the supervision of the public schools of the State, and perform such other duties as may be imposed upon him by the Board and the laws of the State. He shall be elected in the same manner and for the same term as the Governor of the State, and receive such salary as may be fixed by law. An office shall be assigned him in the capitol of the State.

Sec. 3. The members of the Board shall hold office for a term of four years, and until their successors shall be elected and qualified. After the first election under the Constitution, the Board shall be divided into two equal classes, so that each class shall consist of one member from each District. The seats of the first class shall be vacated at the expiration of two years from the day of election, so that one-half may be chosen biennially.

Sec. 4. The members of the Board of Education, except the Superintendent, shall

be elected by the qualified electors of the Congressional Districts in which they are chosen, at the same time and in the same manner as the members of Congress.

SEC. 5. The Board of Education shall exercise full legislative powers in reference to the public educational institutions of the State, and its acts, when approved by the Governor, or when re-enacted by two-thirds of the Board, in case of his disapproval, shall have the force and effect of law, unless repealed by the General Assembly.

SEC. 6. It shall be the duty of the Board to establish, throughout the State, in each township, or other school district which it may have created, one or more schools, at which all the children of the State, between the ages of five and twenty-one years, may attend free of charge.

SEC. 7. No rule or law affecting the general interest of education shall be made by the Board without the concurrence of a majority of its members. The style of all acts of the Board shall be, "Be it enacted by the Board of Education of the State of Alabama."

SEC. 8. The Board of Education shall be a body politic and corporate, by the name and style of the Board of Education of the State of Alabama. Said Board shall also be a Board of Regents of the State University, and when sitting as a Board of Regents of the University, shall have power to appoint the President and the Faculties thereof.

The President of the University shall be *ex officio* a member of the Board of Regents, but shall have no vote in its proceedings.

SEC. 9. The Board of Education shall meet annually at the seat of government at the same time as the General Assembly, but no session shall continue longer than twenty days, nor shall more than one session be held in the same year, unless authorized by the Governor. The members shall receive the same mileage and daily pay as the members of the General Assembly.

SEC. 10. The proceeds of all lands that have been or may be granted by the United States to the State for educational purposes; of the swamp lands; and of all lands or other property given by individuals or appropriated by the State for like purposes and of all estates of deceased persons who have died without leaving a will or heir and all moneys which may be paid as an equivalent for exemption from military duty, shall be and remain a perpetual fund, which may be increased but not diminished, and the interest and income of which, together with the rents of all such lands as may remain unsold, and such other means, as the General Assembly may provide, shall be inviolably appropriated to educational purposes, and to no other purpose whatever.

SEC. 11. In addition to the amount accruing from the above sources, one-fifth of the aggregate annual revenue of the State shall be devoted exclusively to the maintenance of public schools.

SEC. 12. The General Assembly may give power to the authorities of the school districts to levy a poll-tax on the inhabitants of the district in aid of the general school fund, and for no other purpose.

SEC. 13. The General Assembly shall levy a specific annual tax upon all Railroad, Navigation, Banking, and Insurance corporations, and upon all Insurance and Foreign Bank and Exchange Agencies, and upon the profits of foreign bank bills issued in this State by any corporation, partnership or persons, which shall be exclusively devoted to the maintenance of public schools.

SEC. 14. The General Assembly shall, as soon as practicable, provide for the es-

[XVII]

tablishment of an Agricultural College, and shall appropriate the two hundred and forty thousand acres of land donated to this State for the support of such a college, by the act of Congress, passed July 2, 1862, or the money or scrip, as the case may be, arising from the sale of said land or any lands which may hereafter be granted, or appropriated for such purpose, for the support and maintenance of such college or schools, and may make the same a branch of the University of Alabama for instruction in agriculture, in the mechanic arts, and the natural sciences connected therewith, and place the same under the supervision of the Regents of the University.

ARTICLE XII.

INDUSTRIAL RESOURCES.

SEC. 1. A Bureau of Industrial Resources shall be established, to be under the management of a Commissioner, who shall be elected at the first general election, and shall hold his office for the term of four years.

SEC. 2. The Commissioner of Industrial Resources shall collect and condense statistical information concerning the productive industries of the State; and shall make, or cause to be made, a careful, accurate and thorough report upon the agriculture and geology of the State, and annually report such additions as the progress of scientific development and extended explorations may require. He shall, from time to time, disseminate among the people of the State such knowledge as he may deem important, concerning improved machinery and production, and for the promotion of their agricultural, manufacturing and mining interests; and shall send out to the people of the United States and foreign countries, such reports concerning the industrial resources of Alabama, as may best make known the advantages offered by the State to emigrants; and shall perform such other duties as the General Assembly may require.

SEC. 3. It shall be the duty of the General Assembly, at the first session after the adoption of this Constitution, to pass such laws and regulations as may be necessary for the government and protection of this bureau, and also to fix and provide for the compensation of the commissioner.

SEC. 4. This bureau shall be located, and the commissioner shall reside at the capital of the State, and he shall annually make a written or printed report to the Governor of the State, to be laid before the General Assembly at each session.

SEC. 5. In case of the death, removal, or resignation of the commissioner, the Governor, with the approval of the Senate, shall have power to appoint a commissioner for the unexpired term.

ARTICLE XIII.

CORPORATIONS.

SEC. 1. Corporations may be formed under general laws, but shall not be created by special act, except for municipal purposes. All general laws and special acts passed pursuant to this section, may be altered, amended, or repealed.

SEC. 2. Dues from corporations shall be secured by such individual liabilities of the corporators or other means as may be prescribed by law.

SEC. 3. Each stockholder in any corporation shall be liable to the amount of stock held or owned by him.

SEC. 4. The property of corporations now existing, or hereafter created, shall forever be subject to taxation the same as property of individuals, except corporations for educational and charitable purposes.

[XVIII]

SEC. 5. No right of way shall be appropriated to the use of any corporation, until full compensation therefor be first made in money or secured by a deposit of money to the owner, irrespective of any benefit from any improvement proposed by such corporation, which compensation shall be ascertained by a jury of twelve men, in a court of record, as shall be prescribed by law.

SEC. 6. The General Assembly shall not have power to establish or incorporate any bank or banking company, or monied institution, for the purpose of issuing bills of credit, or bills payable to order or bearer, except under the conditions prescribed in this Constitution.

SEC. 7. No bank shall be established, otherwise than under a general banking law, as provided in the first section of this article.

SEC. 8. The General Assembly may enact a general banking law, which law shall provide for the registry and countersigning by the Governor of the State, of all paper credit designed to be created as money; and ample collateral security, convertible into specie, or the redemption of the same in gold or silver, shall be required, and such collateral security shall be under the control of such officer or officers as may be prescribed by law.

SEC. 9. All bills or notes issued as money, shall be, at all times, redeemable in gold or silver, and no law shall be passed sanctioning, directly or indirectly, the suspension, by any bank or banking company, of specie payment.

SEC. 10. Holders of bank notes shall be entitled, in case of insolvency, to preference of payment over all other creditors.

SEC. 11. Every bank or banking company shall be required to cease all banking operations within twenty years from the time of its organization, and promptly thereafter close its business.

SEC. 12. No bank shall receive, directly or indirectly, a greater rate of interest than shall be allowed by law to individuals for lending money.

SEC. 13. The State shall not be a stockholder in any bank, nor shall the credit of the State ever be given or lent to any banking company, association or corporation, except for the purpose of expediting the construction of railroads, or works of internal improvement, within this State, and the credit of the State shall, in no case, be given or lent without the approval of two-thirds of both houses of the General Assembly.

SEC. 15. All corporations shall have the right to sue and shall be subject to be sued, in all courts, in like cases as natural persons.

SEC. 16. It shall be the duty of the General Assembly to provide for the organization of cities, and incorporated towns, and to restrict their power of taxation, assessment and contracting of debt.

ARTICLE XIV.

EXEMPTED PROPERTY.

SEC. 1. The personal property of any resident of this State to the value of one thousand dollars, to be selected by such resident, shall be exempted from sale on execution, or other final process of any court, issued for the collection of any debt contracted after the adoption of this Constitution.

SEC. 2. Every homestead, not exceeding eighty acres of land, and the dwelling and appurtenances thereon, to be selected by the owner thereof, and not in any town, city or village, or in lieu thereof, at the option of the owner, any lot in the city, town or village, with the dwelling and appurtenances thereon, owned and occupied by any

resident of this State, and not exceeding the value of two thousand dollars, shall be exempted from sale, on execution, or any other final process from a court, from any debt contracted after the adoption of this Constitution. Such exemption, however, shall not extend to any mortgage lawfully obtained, but such mortgage or other alienation of such homestead, by the owner thereof, if a married man, shall not be valid without the voluntary signature and assent of the wife of the same.

SEC. 3. The homestead of a family, after the death of the owner thereof, shall be exempt from the payment of any debts contracted after the adoption of this Constitution, in all cases, during the minority of the children.

SEC. 4. The provisions of sections one and two of this article shall not be so construed as to prevent a laborer's lien for work done and performed for the person claiming such exemption, or a mechanic's lien for work done on the premises.

SEC. 5. If the owner of a homestead die, leaving a widow, but no children, the same shall be exempt, and the rents and profits thereof shall inure to her benefit.

SEC. 6. The real and personal property of any female in this State, acquired before marriage, and all property, real and personal, to which she may afterward be entitled by gift, grant, inheritance, or devise, shall be and remain the separate estate and property of such female, and shall not be liable for any debts, obligations, and engagements of her husband, and may be devised or bequeathed by her, the same as if she were a *femme sole*.

ARTICLE XV.

OATH OF OFFICE.

SEC. 1. All civil officers of this State, legislative, executive and judicial, before they enter upon the execution of the duties of their respective offices, shall take the following oath:

"I, —, do solemnly swear (or affirm) that I am not disfranchised by the Constitution of Alabama, or by the Constitution or laws of the United States; that I will honestly and faithfully support and defend the Constitution and laws of the United States, the union of the States, and the Constitution and laws of the State of Alabama, so long as I remain a citizen thereof; and that I will honestly and faithfully discharge the duties of the office upon which I am about to enter to the best of my ability. So help me God."

ARTICLE XVI.

AMENDMENTS TO THE CONSTITUTION.

SEC. 1. The General Assembly, whenever two-thirds of each house shall deem it necessary, may propose amendments to this Constitution, which proposed amendments shall be duly published in print at least three months before the next general election of representatives, for the consideration of the people; and it shall be the duty of the several returning officers at the next general election which shall be held for representatives, to open a poll for, and make a return to the Secretary of State for the time being, of the names of all those voting for representatives who have voted on such proposed amendments, and if thereupon it shall appear that a majority of all the citizens of the State voting for representatives have voted in favor of such proposed amendments, and two-thirds of each house of the next General Assembly shall, after such an election, and before another, ratify the same amendments, by yeas and nays, they shall be valid to all intents and purposes, as part of this Constitution: *Provided*, That the said proposed amendments shall, at each of the said sessions, have been read three times on three several days in each house.

After the expiration of twelve months from the adoption of this Constitution, no Convention shall be held for the purpose of altering or amending the Constitution of this State, unless the question of Convention or no Convention shall be first submitted to a vote of all the electors, twenty-one years of age and upward, and approved by a majority of the electors voting at said election.

ALABAMA STATE GOVERNMENT.

WILLIAM H. SMITH.....Governor.
A. J. APPEGATE.....Lieutenant-Governor.
CHARLES A. MILLER.....Secretary of State.
R. M. REYNOLDS.....Auditor.
ARTHUR BINGHAM.....Treasurer.
N. B. CLOUD.....Superintendent of Education.
JOHN C. KEEFER.....Commissioner of Industrial Resources
JOSHUA MORSE.....Attorney-General.

SUPREME COURT JUDGES.

E. W. Peck.....Chief-Justice.
Thomas M. Peters.....Associate-Justice.
Benjamin E. Saffold....." "

CHANCELLORS.

William Skinner.....Northern Division.
William B. Woods.....Middle "
Adam C. Felder.....Southern "
Anthony M. Dillard.....Western "
B. B. McCraw.....Eastern "

CIRCUIT JUDGES.

Benjamin L. Whelan.....First Judicial Circuit.
James Q. Smith.....Second " "
William S. Mudd.....Third " "
James S. Clark.....Fourth " "
William J. Haralson.....Fifth " "
John Elliot.....Sixth " "
Luther R. Smith.....Seventh "
J. McCaleb Wiley.....Eighth " "
Littleberry Strange.....Ninth " "
Charles Pelham.....Tenth " "
William L. Whittock.....Twelfth "
Philemon O. Harper.....Elev'th " "

JUDGES OF CITY COURTS.

C. F. Moulton.....Mobile.
J. D. Cunningham.....Montgomery.
J. S. Corbin.....Selma.
.....Huntsville.

BOARD of EDUCATION.

First District—G. L. Putnam, of Mobile; W. P. Miller, of Conecuh.
Second District—C. H. Adams, of Montgomery; A. H. Allen, of Lowndes.
Third District—Thomas A. Cook, of Talladega; Thomas J. Jackson, of Chambers.
Fourth District—Jesse H. Booth, of Autauga; H. W. Davis, of Marengo.
Fifth District—W. H. Clayton, of St. Clair; James Nichols, of Jackson.
Sixth District—G. A. Smith, of Lawrence; A. B. Collins, of Franklin.

LEGISLATURE.

The following are the members of both Houses of the Alabama Legislature:

THE STATE SENATE.

- | | |
|--|--|
| 1. Limestone and Lauderdale—Benjamin Lentz. | 15. Russell—Wm. B. Martin. |
| 2. Franklin and Lawrence—D. V. Sevier. | 16. Bullock—Benjamin Royal. |
| 3. Morgan, Blount, Winston and Marion—J. J. Hinds. | 17. Barbour—J. W. Mabry. |
| 4. Madison—I. D. Sibley. | 18. Autauga and Elmore—J. A. Far-
den. |
| 5. Jackson, Marshall and DeKalb—C. O. Whitney. | 19. Montgomery—J. P. Stow. |
| 6. Cherokee and Calhoun—H. C. Sanford. | 20. Lowndes—Wm. M. Buckley. |
| 7. Walker, Jefferson and St. Clair—John Oliver. | 21. Dallas—D. E. Coon. |
| 8. Shelby and Bibb—Jesse W. Mahan. | 22. Perry—F. D. Wyman. |
| 9. Tuscaloosa and Fayette—J. F. Morton. | 23. Hale—B. Johnson. |
| 10. Talladega and Clay—Green T. McAfee. | 24. Green and Pickens—Charles Hays. |
| 11. Chambers, Randolph and Cleburne—Hicks H. Wise. | 25. Sumter—J. A. Yordy. |
| 12. Coosa and Tallapoosa—Thomas Lambert. | 26. Marengo—W. B. Jones. |
| 13. Lee—J. L. Pennington. | 27. Choctaw, Clarke and Washington—John T. Foster. |
| 14. Macon—Robert Mitchell. | 28. Mobile—F. G. Bromberg. |
| | 29. Baldwin and Monroe—R. N. Barr. |
| | 30. Wilcox—J. D. F. Richards. |
| | 31. Butler and Conecuh—William Miller, Jr. |
| | 32. Covington, Crenshaw and Pike—A. N. Worthy. |
| | 33. Coffee, Dale and Henry—Phillip King. |

REPRESENTATIVES.

- | | |
|--|---------------------------------------|
| Autauga—Alfred Baker. | Cherokee—R. A. Reeves. |
| Baldwin—A. L. Holman. | Cleburne—M. R. Bell. |
| Bullock—D. H. Hill, S. Speed. | Crenshaw—Wm. Mastin. |
| Bibb—P. A. Kendrick. | Coffee—J. G. Moore. |
| Barbour—David Low, O. C. Doster, Thomas Diggs. | Conecuh—John Yates. |
| Blount—George White. | Choctaw—L. R. Smith. |
| Butler—John A. Hart. | Coosa—James Vanzandt. |
| Chambers—W. L. Taylor. | Covington—E. J. Mansel. |
| Calhoun—Thomas D. Fister. | Dale—John R. Ard. |
| Clay—T. W. Newsom. | Dallas—Alden Emmons, Jos. Drawn, |
| Clarke—B. R. Wilson. | S. Weaver, John Hurdy, W. A. Brantley |
| | DeKalb—George W. Malone. |

Elmore—W. V. Turner.
 Fayette—
 Franklin—H. C. Tompkins.
 Greene—Benjamin Alexander, A. R.
 Davis.
 Hale—J. M. Walker, J. K. Greene.
 Henry—E. E. Fitler.
 Jefferson—Thomas Sanford.
 Jackson—James W. Daniel, W. F.
 Hurt.
 Lauderdale—Wm. R. Chisholm.
 Lowndes—John Nininger, T. W. Arm-
 strong, Nathan Brewster.
 Lee—Coke Tucker, Samuel Blanden.
 Lawrence—Thomas Masterson, E. F.
 Jennings.
 Limestone—R. E. Harris.
 Marshall—S. F. Kennamer.
 Macon—Jas. H. Alston, Wm. Alley.
 Marion—Greene M. Haley.
 Madison—Jeff. McCalley, Justin Ro-
 nayne.
 Monroe—D. L. Neville.
 Marengo—Pierce Burton, J. N. De-
 reen, Edward Rose.
 Morgan—W. G. W. Smith.
 Mobile—J. E. Quinn, J. Carraway
 Ovide Gregory, George F. Harrington,
 James Shaw.
 Montgomery—W. C. Arthur, Paul
 Strobach, L. J. Williams, Holland
 Thompson, George W. Cox.
 Pickens—B. R. Boyle, S. Bronson.
 Perry—Greene Lewis, T. C. Steward,
 Matt. Avery
 Pike—J. B. Hubbard.
 Russell—Horace King, J. H. Tyner.
 Randolph—Jack Wood.
 Sumter—A. C. Hewling, Geo. Hous-
 ton, Benjamin Inge.
 St. Clair—H. J. Springfield.
 Shelby—E. W. Attaway.
 Talladega—H. H. W. Rice, E. T.
 Childress.
 Tallapoosa—C. T. Thweatt, C. Cor-
 prew.
 Tuscaloosa—S. W. Jones.
 Walker—W. T. Stubblefield.
 Washington—
 Winston—Jonathan Taylor.
 Wilcox—A. J. Richardson, M. G. Can-
 dee, D. F. Richards.

COUNTY OFFICERS.

COUNTIES.	PROBATE JUDGE.	SHERIFF.	SOLICITORS.
Autauga.....	W. G. M. Golson.	P. H. Whetstone.	Jesse H. Booth.
Baldwin.....	O. P. Hall.	G. B. Hall.	M. B. Jonas.
Barbour.....	Henry C. Russell.	Wm. M. Russell.	
Baker.....	Mordecai Roberson.	Thos. H. Williams.	
Bibb.....	Jackson Gardner.	John T. Atchison.	
Blount.....	J. W. Moore.	Andrew J. Durham.	
Bullock.....	Wm. H. Black.	Thos. Ramsay.	Fleming Law.
Butler.....	Sam'l S. Gardner.	H. Pierce.	Wm. Seawell.
Calhoun.....	A. Woods.	J. M. Williams.	
Chambers.....	John Appleby.	R. J. Killam.	Cicero D. Chambers.
Clarke.....	Jack. R. Wilson.	David D. Dawson.	Sam'l W. Beckham.
Clay.....	R. L. Belamy.		
Cherokee.....	James Bradford.	Iva Webb.	McElrath.
Cleburne.....	A. D. Chandler.		
Crenshaw.....	G. W. Thayard.	John R. Snow.	
Choctaw.....	John T. Foster.	Alex. M. Hill.	
Conecuh.....	Aug. W. Jones.	James Fortner.	
Coosa.....	Thos. H. Farguson.	Wm. C. Lucky.	Geo. W. Richardson.
Covington.....	Thos. P. Cottle.	G. T. Franklin.	
Coffee.....	Benj. M. Weeks.		

COUNTIES.	PROBATE JUDGE.	SHERIFF.	SOLICITORS.
Dale.....	L. B. Brown.	J. B. Daugherty.	H. H. Blackman.
Dallas.....	J. F. Conoly.	Geo. P. Rex.	Jasper N. Haney
DeKalb.....	A. J. Horton.		
Escambia.....	F. B. Bonifay.	Wiley B. Franklin.	James E. Crew.
Elinore.....	W. E. Dennis.	John C. Miller.	W. G. Deloney.
Etowah.....	Jas. M. Moragne.	Sam'l Dillard.	
Hayette.....	B. W. Wilson.	F. M. Treadaway.	
Franklin.....	Geo. L. Mingo.	Phil. H. Gates.	Chas. Womble.
Greene.....	William Miller.	Geo. H. Cole.	Alexander Boyd.
Geneva.....	T. H. Yarbrough.		
Hale.....	W. T. Blackford.	H. C. Childress.	Geo. M. Duskin.
Henry.....	John B. Appling.	Jacob M. Gamble.	
Jackson.....	David Tate.	J. J. Roberts.	Jasper J. Jones.
Jefferson.....	J. C. Morrow.	M. A. May.	W. A. Walker.
Lauderdale.....	Thos. T. Allington.	C. W. Wesson.	
Lawrence.....	J. H. McDonald.	A. C. Garrett.	C. C. Harris.
Lee.....	David Reed.	J. R. Bailey.	T. F. Gorden.
Limestone.....	J. P. Coman.	Wm. H. Lentz.	
Lowndes.....	John V. McDuffie.	Wm. H. Hunter.	
Macon.....	J. J. Martin.		A. L. Brooks.
Madison.....	L. M. Douglas.	Joseph Doyle.	— Williams.
Marengo.....	P. E. O'Conner.	Jacob Michael.	W. H. Grant.
Marion.....	John D. Terrell.	Lewis F. May.	
Marshall.....	L. D. Lusk.	John Kerby.	W. T. Beard.
Mobile.....	Gustavus Horton.	A. M. Granger.	M. B. Jonas.
Monroe.....	John W. Leslie.	John A. Simmons.	T. J. Dukes.
Montgomery.....	George Ely.	Robert Barber.	John G. Stokes.
Morgan.....	Jonathan Ford.	H. G. Thomas.	C. C. Nesmith.
Perry.....	Benj. S. Williams.	Jacob S. Williams.	Rufus J. Reid.
Pickens.....	R. R. Boyle.	Stewart Ware.	J. W. Langdon.
Pike.....	W. C. Wood.	W. H. Strickland.	
Randolph.....	W. W. Dobson.		
Russell.....	T. L. Appleby.	Chas. H. May.	Ulysses Lewis.
Sanford.....	Thos. Morton.	Luke Gunn.	
Shelby.....	Sam'l E. Busby.	L. H. Drych.	—
St. Clair.....	Thos. A. Ramsay.	John C. Brown.	Ransom Respass.
Sumter.....	A. J. Abrahams.	W. W. Dillard.	Reuben Chapman.
Talladega.....	Geo. P. Plowman.	F. M. Shouse.	W. S. McAfee.
Tulapoosa.....	Allen D. Sturdevant.	Wade A. Hume.	H. A. Garrett.
Tuscaloosa.....	William Miller.		
Walker.....	John Brown.	Geo. Johnson.	J. W. Houghton.
Washington.....	J. W. Gordy.		M. B. Jonas.
Wilcox.....	James H. Burdick.	DeForest Richards.	Chas. C. Colton.
Winston.....		J. L. McAlister.	—

CONDITION OF THE FINANCES OF ALABAMA.

THE report of R. M. Reynolds, Auditor, made on Nov. 10, 1868, to the Chairman of the House Committee of Ways and Means, shows the indebtedness of the State of Alabama to consist of Bonded, Trust Fund, and Miscellaneous debts, as follows :

BONDED.

5 per cent. payable in New York in 1872	\$ 168,000
5 per cent. payable in New York in 1883	1,941,000
5 per cent. payable in New York in 1866	473,800
6 per cent. payable in London in 1870	688,000
5 per cent. payable in London in 1886	648,000
5 per cent. payable in London in 1886	64,800
6 per cent. payable in London in 1886	82,500
8 per cent. payable in New York and reported sold by Gov. Patton.....	660,200
Total bonded indebtedness	<u>\$4,726,300</u>

TEMPORARY LOANS.

National Bank, New York	\$90,000
Duncan, Sherman & Co.	19,350
Negotiated by Governor Smith	7,615

\$116,965

School Fund Indebtedness	\$ 1,710,157 45
University Fund Indebtedness	300,000 00
Surplus Revenue	669,086 80
Valueless 16th Section Fund	97,091 21
Interest due	245,411 46

\$4,843,265 00

Total School Fund debt	\$3,051,746 92
Outstanding State Certificates, as per Treasurer's report, Oct. 10, 1868...	39,105 00

Aggregate Indebtedness	<u>\$7,904,116 92</u>
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The following is an exhibit of the receipts and disbursements for the fiscal year, ending September 30, 1868, as shown by the records of this office:

RECEIPTS.

From October 1, 1867, to July 23, 1868	\$1,544,795 94
From July 24, to September 30, 1868	32,348 14

Total	<u>\$1,577,144 08</u>
of which \$726,227 42 were collected from general taxes, licenses, etc.	

DISBURSEMENTS.

From October 1, 1867, to July 23, 1868	\$1,433,819 64
From July 24, 1868, to September 30, 1868	70,587 66

Total	<u>\$1,504,407 30</u>
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ESTIMATE OF EXPENDITURES FOR ENSUING YEAR.

For interest on bonded debt 1 year.....	\$ 314,058 20
For interest on University Fund	24,000 00
For interest on 16th section, and value section 16th.....	144,579 89
For interest on surplus revenue.....	53 526 94
For salaries of State officers.....	24,000 00
For salaries of Judges of the Supreme Court.....	12,000 00
For salaries of Judges of the Circuit Court.....	36,000 00
For salaries of Chancellors.....	15,000 00
For salaries of clerks and employes at capitol.....	7,600 00
Feeding and removing State prisoners.....	75,000 00
Making returns of elections.....	750 00
Distributing acts and journals.....	1,500 00
Public printing.....	25,000 00
Fuels, lights, stationery, etc.....	9,000 00
Special appropriations.....	10,000 00
Contingent expenses.....	8,000 00
Miscellaneous items.....	11,000 00
Educational contingent expenses.....	1,000 00
One-fifth of aggregate annual revenue.....	200,000 00
Members, officers, etc., of the General Assembly.....	60,000 00
Total.....	\$1,032,015 03

The total assessment of real estate reported by counties for the fiscal year ending September 30, 1868, amounts to \$98,908,572. The total assessment of personal property for the same time amounts to \$26,037,803, showing an aggregate of \$123,-946,475.

The revenues for the ensuing year were reported at \$1,100,000, leaving a margin for insolvencies and errors, as provided by law. The resources provided by law to meet liabilities as they mature, were as follows :

Eight per cent. bonds hypothecated with Duncan, Sherman & Co.....	\$ 33,700
Eight per cent. bonds, National Bank of New York.....	180,000
Authorized issue of eight per cent. bonds.....	500,000
	<u>\$718,700.</u>

REVENUE LAW OF ALABAMA.

The Revenue Law, enacted by the Legislature of 1868, exempts from taxation :

1. All property belonging to the United States.
2. All property belonging to the State, or any county, city, or town.
3. All bonds of the United States, and the State.
4. All public school houses and ten acres of ground.
5. All houses for public worship, their books, furniture, and ten acres of ground.
6. All the property of literary, scientific, and benevolent institutions, actually in proper use.
7. Cemeteries and places of burial.
8. The libraries and books of ministers of the gospel, and colporteurs.
9. To every head of a family, \$500 worth of personal property.

10. All insane and blind persons, and their property, to the value of one thousand dollars.

11. All disabled persons, whose taxable property does not exceed five hundred dollars, from any poll-tax.

12. All family portraits.

13. All the wearing apparel of the family, not exceeding one hundred dollars in value, to each member.

14. All shares of the capital stock of any company or corporation.

THE KINDS OF TAX ARE :

I. A Poll-tax of \$1 50, for the use of schools.

II. An *ad valorem* tax of three-fourths of one per cent. on all real and personal property.

III. An Income tax, as follows :

1. On the gross amount of all sales at auction, made in or during the tax year preceding the assessment, except those made by or under the direction of executors administrators, and guardians, as such, by order of court, or under legal process, and under any deed, will, or mortgage, at the rate of three-fourths of one per cent. *ad valorem*.

2. On the gross amount of premiums (after deducting therefrom all return premiums) received from their business in this State, during such tax year, by any insurance company not chartered by this State, and doing business therein by agents or otherwise, at the rate of two per cent., exclusively for public school purposes.

3. On the gross amount of premiums received from their business in this State during such tax year, by any insurance company chartered by, or organized under, any of the laws of this State, one per cent. on the gross amount of premiums, exclusively for public school purposes.

4. On the gross amount of commissions or sums charged or received in or during such tax year, by any factor, commission merchant, or auctioneer, in buying, selling, or any other act done in the course of their business, at the rate of three-fourths of one per cent.

5. On the gross receipts, during such tax year, of all cotton pickeries, and from the storage of cotton, or other merchandise or produce, at the rate of three-fourths of one per cent.

6. On the gross receipts of lotteries and gift enterprises, three-fourths of one per cent.

7. On the gross profits of all banking associations, created under the laws of the United States, at the rate of three-fourths of one per cent.

8. On all dividends declared or earned and not divided by incorporated companies created under the laws of this State, to be assessed to and paid by the companies earning or declaring the same, a tax of three-fourths of one per cent.

9. On the gross commissions of all real estate brokers, at the rate of three-fourths of one per cent.

10. On the gross receipts of all breweries, at the rate of three-fourths of one per cent.

11. On the gross receipts of express and telegraph companies, three-fourths of one per cent.

12. On the annual gains, profits or incomes of every person residing in the State, from whatever source derived, and upon all salaries and fees of public officers, and upon the salaries of all other persons, upon the excess of gains, profits, incomes,

fees or salaries, over the ten hundred dollars, at the rate of one per cent. *ad valorem*: *Provided*, That in estimating the annual gains, profits or incomes of any person, all national, State and county, and municipal taxes assessed to and paid by such persons, within the year, except the tax assessed by this section, shall be deducted therefrom; also, all income derived from dividends, or on shares in the capital stock of any incorporated company (where such tax has been assessed and paid by such incorporated company:) also, the amount paid by any person for the rent of the homestead used, or the rental value of the homestead if owned by himself or his family: also, when any person rents buildings, lands, or other property, or hires labor to cultivate such lands, or to conduct any other business from which such income is actually derived, or pays interest upon any actual incumbrance thereon, the amount actually paid for such rent, labor or interest, or the rental value of any lands cultivated as above, if owned by the occupant thereof, shall be deducted; also, the amount paid out for usual ordinary repairs, not including any new buildings or permanent improvements, shall be deducted.

I. A license tax as follows:

1. For each public race-track, at or within ten miles of any city or town, containing less than five thousand inhabitants, one hundred dollars; at or within ten miles of any city or town containing more than five thousand and less than ten thousand inhabitants, one hundred dollars; any city over ten thousand inhabitants, two hundred and fifty dollars.

2. For lottery ticket dealers, five hundred dollars.

3. For carrying on a gift enterprise, five hundred dollars.

4. For retailers in spiritous, vinous or malt liquors, on any steamboat or water craft, one hundred and seventy-five dollars; in any place not in any incorporated city, town or village, fifty dollars; in any incorporated city, town or village, of more than one thousand and less than five thousand inhabitants, seventy-five dollars; in any city of over five thousand inhabitants, two hundred dollars.

5. For wholesale dealers in spiritous, vinous or other malt liquors in any place of less than five thousand inhabitants, fifteen dollars; in any city of over five thousand and less than fifteen thousand inhabitants, twenty-five dollars; in any city of over fifteen thousand inhabitants, fifty dollars.

6. For compounders and rectifiers of spiritous or vinous liquors, twenty-five dollars.

7. For distillers of spiritous liquors, twenty-five dollars.

8. For brewers, fifteen dollars.

9. For dealers in tobacco and cigars, ten dollars.

10. For livery stable keepers, twenty-five dollars.

11. For keepers of stud horses or jacks, five dollars.

12. For horse and mule dealers, ten dollars; but any person having taken out a license as livery stable keeper, may trade in horses and mules without an additional license.

13. For brokers, fifty dollars.

14. For pawnbrokers, fifty dollars.

16. For insurance agents, five dollars for each company represented.

17. For dentists, ten dollars.

18. For physicians and surgeons, ten dollars.

19. For lawyers, twenty dollars.

20. For druggists in any city or town of less than one thousand inhabitants, and

[XXVIII]

in the country, five dollars; in any town or city of more than one or less than five thousand inhabitants, ten dollars; in any city of over five thousand inhabitants, twenty dollars.

21. For commission merchants and brokers, twenty-five dollars.

22. For peddlers in a wagon, forty dollars; for peddlers on horseback, twenty dollars; for peddlers on foot, ten dollars. A peddler's license shall entitle him to peddle only in the county where it is taken out.

23. For bowling alleys, ten dollars for each alley.

24. For billiard tables, twenty-five dollars for each table.

25. For any table on which the game of pool is played, three hundred dollars.

26. For bagatelle tables, forty dollars each: *Provided*, That this sub-division shall not apply to the Jenny Lind tables, and all tables where a game is played, not for money; and without charging anything for it, and each table shall be exempt from license.

27. For theaters, fifty dollars.

28. For dealers in fire-arms, twenty dollars.

29. For auctioneers, twenty-five dollars.

30. For newspapers, other than religious, agricultural or scientific journals, ten dollars.

License may be granted for the following occupations, for the term hereafter specified:

1. For each exhibition of a circus, fifty dollars.

2. For each exhibition of a menagerie, or museum, twenty dollars.

3. For each exhibition of a side-show accompanying a circus, menagerie or museum, ten dollars.

4. For concerts and musical entertainments, except such as are given for charitable purposes, ten dollars.

Courts of county commissioners are authorized to add to the price of licenses such sums as they may designate, not to exceed the price charged by the State, and to allow the county treasurer such sum as they may designate for his services, to be paid out of the county treasury.

All lands donated by acts of Congress to railroads in this State, remaining unsold and uncultivated, are exempt from taxation. *Provided*, this exemption shall cease at the expiration of five years from the passage of the act and at any time whenever such lands are held at more than two dollars and fifty cents per acre.

The buildings and machinery of iron furnaces, foundries, rolling-mills, machine shops, nail and ax factories, tanneries and manufactories of leathern goods, paper mills, glass works, stove and earthen ware factories, woolen and silk factories, and cotton, are exempt during their erection, and for one year after they commence operations.

Any person who, after the third Monday in March, 1869, shall be engaged in or carry on any business or profession, or do any act for the doing, prosecuting, or carrying on of which a license is by law required to be taken out, without having paid for and taken out such license, shall be deemed guilty of a misdemeanor, and shall be fined three times the amount of such license, and may be confined in the county jail not exceeding one year, at the discretion of the court.

Instructions from the Auditor's office declare:

Dealers in spiritous, vinous or malt liquors, in quantities of *one quart* or less than

one quart, are deemed retail dealers, while those selling in quantities over one quart are deemed wholesale dealers.

License for retail dealers, in an incorporated town of less than one thousand inhabitants, will be the same as charged for any town not incorporated, or for a village.—See section 112, paragraph 4.

Dealers in guns, pistols, or other fire-arms, and also dealers in tobacco or cigars, are liable for license, whether these articles are sold in connection with other merchandise, or to the exclusion of all other articles of traffic or trade.

Public feed stables, or stables where a charge is made for feeding horses, mules, etc., are deemed livery stables; also, those where horses, buggies, carriages, etc., are hired.

"Each exhibition" of circus, menagerie, or museum, etc., shall be construed to read, "each performance," for which a charge is made for admission.

Jenny Lind tables are liable to license tax the same as bagatelle tables, if used to play for money, or where pay is required, directly or indirectly, for the use of such tables.

No license is valid outside of the county where issued. Changes made by parties in cities or towns, by removal, must be reported to the Judge of Probate, and approved, otherwise the license shall be considered as forfeited. (This ruling does not apply to attorneys-at-law.)

The county commissioners' court may or may not add to the price of any license imposed by the State, at the option of such court; but in no case can the court levy an amount to exceed the price charged by the State.—(See section 114.)

No provision is made by law for payment of fees to the county treasurer, except by the court of county commissioners.—(Section 114.)

Each member of a law firm, firm of physicians or dentists, or other professions, is required to take out license to practice such profession.

License to sell articles from store or ware-room may be taken out in the name of the firm or style of partnership.

PUBLIC SCHOOL SYSTEM OF ALABAMA.

THE fund appropriated annually, by constitutional provision, for the support of public schools in Alabama, is composed of:

1. The proceeds of all lands granted by the United States, for school purposes. This fund now amounts to \$3,051,746 92, bearing interest at 8 per cent.—\$244,129.
2. Special appropriations by the State or individuals.
3. Escheated estates.
4. Money paid for exemption from military duties.
5. An annual appropriation of one-fifth of the revenue.
6. A poll-tax of one dollar and fifty cents.

The first source of income for the school system, gives annually, \$244,129.

The second, third and fourth sources can not be estimated.

The fifth source gives a full tax of one and one-half dollar upon every male adult. The male adults, by the census of 1866, were 200,577. They may now be estimated at 210,000. This number should afford an annual income to the public schools of \$315,000.

The sixth source, upon the basis of the Auditor's estimate for 1868, will give \$200,000.

The total income from certain sources may be stated at \$759,129.

The management of the school system may be seen from the chapter of the Constitution entitled, "Education."

By comparison of the Constitutional provisions, the enactments of the Legislature, and the amount of appropriations in behalf of the public school system of Alabama, with those of any other State of the Union, it will be found that she stands among the first in quality and extent of provision for educating the people.

VOTE UPON THE PRESENT ALABAMA CONSTITUTION.

The following table gives the comparative vote of those who were in favor of ratifying the Constitution, and those who showed their opposition either by voting against it or not voting at all. It gives, also, the number of representatives in the General Assembly apportioned in accordance with the existing Constitution:

Counties.	Registered vote.	For Constitution.....	Against Constitution.....	Number of representatives....	Counties.	Registered vote.	For Constitution.....	Against Constitution.....	Number of representatives....
Baldwin.....	1,074	495	578	1	Elmore.....	2,479	850	1,629	1
Baine	1,140	261	879		Fayette.....	1,106	243	863	1
Barbour.....	5,123	2,801	3,322	3	Franklin.....	985	350	635	2
Bibb.....	1,704	777	927	1	Henry	2,117	810	1,307	1
Blount.....	1,386	692	694	1	Jackson.....	2,865	600	2,265	2
Butler	2,671	1,146	1,525	1	Jefferson.....	1,789	561	1,228	1
Bullock.....	4,482	1,900	2,582	3	Lauderdale....	2,466	655	1,811	1
Calhoun.....	2,034	502	1,532	1	Lawrence.....	2,595	1,233	1,362	2
Chambers.....	2,718	739	1,979	2	Limestone.....	2,400	789	1,611	1
Clay	1,132	100	1,032	1	Lee	3,561	1,338	2,223	2
Clarke	2,321	203	2,128	1	Macon	3,305	1,634	1,671	2
Cherokee.....	1,548	437	1,111	1	Madison	4,770	2,160	2,610	3
Cleburne	1,178	140	1,038	1	Marshall	1,371	504	887	1
Crenshaw.....	1,554	152	1,402	1	Marion	752	357	395	1
Choctaw	2,179	1,003	1,176	1	Monroe.....	2,429	701	1,728	1
Coffee	1,275	250	1,025	1	Pike	2,682	1,000	1,682	1
Conecuh	1,783	401	1,382	1	Randolph	1,460	596	964	1
Coosa.....	1,679	455	1,224	1	St. Clair.....	1,760	340	1,420	1
Colbert.....	1,810	605	1,205		Talladega.....	2,988	1,425	1,563	2
Covington.....	774	82	692	1	Tallapoosa.....	2,965	270	2,595	2
Dale	1,896	621	1,275	1	Tuscaloosa....	3,390	1,665	1,725	2
DeKalb.....	893	384	509	1	Washington...	630	282	398	1

IMPORTANCE OF CHEAP TRANSPORTATION.—In 1865 Minnesota produced 10,000,000 bushels of wheat. Three-fourths of this could have been exported if facilities of cheap transportation had offered inducement. In 1866, higher prices—which produce the same effect as cheaper freight—led to the exportation of 8,000,000 of bushels.

ASSESSMENT OF TAX ON REAL ESTATE IN EACH COUNTY,
(INCOMPLETE.)

Counties Assessed.	Land—No. Acres.....	Value.....	Tax on same— 30 cts. on \$100.	Town Property, No. of Lots.	Value.....	Total Tax on Real Estate.	Tax on same— 30 cts. on \$100.
Autauga.....	292,453½	713,194	2,039.58	113	124,200	372.60	2,512.18
Bullock.....	328,882	1,496,370	4,489.81	223	283,320	849.96	5,339.77
Baldwin.....	2,071,648	583,509	1,750.52				1,750.52
Blount.....	254,563	506,450	1,533.25		11,200	33.60	1,566.85
Bibb.....	248,637	468,420	1,405.26	75	17,925	53.77	1,459.03
Barbour.....	440,663	1,405,300	4,215.90	579	1,031,410	3,094.23	10,721.52
Calhoun.....	194,877	857,924	2,573.07		112,243	376.33	291.50
Cherokee.....	185,251	940,815	2,822.44		11,430	34.29	2,856.73
Coffee.....	282,394	374,784	1,124.35	140	16,138	48.51	1,172.86
Clay.....	193,889	238,065	984.19	22	2,290	6.87	991.06
Conecuh.....	328,025	296,203	888.90	100	58,070	174.21	1,417.48
Chambers.....	292,584	689,602	2,068.80		98,035	294.10	2,362.90
Clarke.....	520,218	815,190			41,130		2,568.96
Coosa.....	268,368	498,272.10	1,504.70	57	4,785	14.35	1,519.05
Crenshaw.....	247,965	487,826.31	1,463.48		3,705	11.11	1,474.59
Cleburne.....	138,539	301,947	879.53		2,900	8.70	1,185.04
Dale.....	342,267	709,214	2,127.64	91	3,425	102.07	2,229.71
Dallas.....	331,375	1,361,479	4,084.44		1,344,475	4,033.43	8,117.87
DeKalb.....	103,745	418,851	1,256.55	16	16,560	4.95	1,850.18
Elmore.....	265,619	537,858	1,613.57	222	120,750	362.25	1,975.82
Franklin.....	335,008	385,870	1,157.61	76	8,125	24.37	1,733.56
Fayette.....	207,222	34,633	864.89		7,640	22.92	987.81
Greene.....	397,715	2,030,822	6,092.46		262,255	786.76	6,879.22
Hale.....	350,880	1,344,100	4,032.30		309,256	927.75	4,960.05
Henry.....	282,913	478,731	1,436.19		42,645	127.93	1,564.12
Jefferson.....	287,568½	690,570	2,071.53	89	34,965	104.89	2,901.90
Jones.....	270,541	326,881	980.64		715	2.14	1,510.38
Jackson.....	247,841	125,318	3,750.95	125½	28,360	85.14	3,836.09
Lawrence.....	295,986	1,127,608	3,382.50		60,525	181.57	3,564.40
Lauderdale.....	339,653	1,143,386	3,430.16	246	213,575	640.25	4,070.41
Limestone.....	289,720	1,296,943	3,890.83	128	184,260	552.78	4,443.61
Lowndes.....	342,893	1,220,800	3,662.70	146	170,470	523.40	4,186.00
Madison.....	418,060	2,452,132	7,356.39	801	1,489,099	4,464.28	11,820.67
Monroe.....	297,880	416,913	1,667.64	68½	14,750	59.00	1,726.64
Montgomery.....	318,839	1,717,080	5,151.24	591	4,497,250	13,491.75	18,642.99
Marion.....	207,685	133,132	549.39	37	1,755	5.26	554.66
Macon.....	257,934	1,082,048	3,246.14		201,335	604.00	3,850.00
Mobile.....		18,209,472	54,628.41			18,209.47	72,837.88
Marengo.....	505,768	1,577.07	4,731.35	328	229,400	688.20	5,419.55
Morgan.....	261,009	796,470	2,389.41	296	114,780	344.34	2,733.75
Marshall.....	131,543	643,639	2,574.45		29,560	118.26	2,692.71
Pike.....	325,302	972,139	2,916.41	139	74,265	222.79	3,139.21
Perry.....	405,993½	1,553,000	4,659.00	332	506,485	1,519.45	6,178.46
Randolph.....	225,076	387,789	1,188.48		13,115	39.49	1,227.97
Russell.....	323,357	1,108,358	3,315.06	328	71,555	214.56	3,539.72
Shelby.....	291,832	560,810	1,682.42		46,150	138.45	1,820.88
Sumter.....	507,823	1,744,544	5,230.63	(Town property included.)			5,230.63
Talladega.....	297,522	1,326,246	4,000.51		307,460	928.92	6,572.68
Tallapoosa.....	367,614	814,435	2,443.30	104	39,850	119.55	2,562.85
Tuscaloosa.....	461,970	859,284	3,777.86	550	391,790	1,175.35	3,753.32
Winston.....	68,522	78,335	235.00				225.00
Walker.....	170,490	219,765	659.29	12	3,260	9.78	669.07
Wilcox.....	345,976	980,015	2,940.04		157,980	473.94	3,413.99

REGISTRATION OF VOTERS IN ALABAMA.

		1867.	1868.			1867.	1868.
		<i>Mil. Reg.</i>	<i>Civil Reg.</i>			<i>Mil. Reg.</i>	<i>Civil Reg.</i>
Autauga.....	2,531	2,398	Jones (Sanford)	1,201	972		
Baine.....	1,310	1,154	Lauderdale.....	2,511	2,178		
Baldwin.....	1,205	1,471	Lawrence.....	2,702	2,441		
Barbour.....	5,184	5,966	Lee.....	3,660	3,822		
Bibb.....	1,704	1,589	Limestone.....	2,433	1,961		
Blount.....	1,407	890	Lowndes.....	4,801	5,185		
Bullock.....	4,547	4,330	Macon.....	3,334	3,645		
Butler.....	2,795	3,136	Madison.....	5,023	4,692		
Calhoun.....	2,080	2,040	Marengo.....	5,208	5,583		
Chambers.....	2,797	2,826	Marion.....	886	121		
Cherokee.....	1,755	1,349	Marshall.....	1,451	1,278		
Choctaw.....	2,197	2,247	Mobile.....	9,795	12,840		
Clarke.....	2,381	2,493	Monroe.....	2,415	1,848		
Clay.....	1,193	1,152	Montgomery.....	8,802	9,465		
Cleburne.....	1,204	950	Morgan.....	1,732	1,455		
Coffee.....	1,438	1,044	Perry.....	5,373	5,362		
Colbert.....	2,029	1,600	Pickens.....	2,871	2,482		
Conecuh.....	1,834	1,936	Pike.....	2,672	2,505		
Coosa.....	1,807	1,884	Randolph.....	1,497	1,443		
Covington.....	813	700	Russell.....	3,575	3,744		
Crenshaw.....	1,547	1,521	Shelby.....	2,023	2,033		
Dale.....	1,924	1,784	St. Clair.....	1,252	1,324		
Dallas.....	8,524	9,141	Sumter.....	4,665	4,685		
DeKalb.....	889	953	Talladega.....	3,115	3,307		
Elmore.....	2,559	2,665	Tallapoosa.....	2,979	2,859		
Fayette.....	1,126	708	Tuscaloosa.....	3,406	3,496		
Franklin.....	979	931	Walker.....	923	615		
Greene.....	3,773	3,973	Washington.....	662	533		
Hale.....	4,479	4,509	Wilcox.....	4,755	5,198		
Henry.....	2,348	2,165	Winston.....	545	458		
Jackson.....	2,955	2,616					
Jefferson.....	1,796	1,797					
				171,378	171,448		

In the Dubuque *Herald* of March 18, 1868, it was stated that the Mississippi Barge Company advertised the following rates:

Wheat from St. Paul to New York.....	36 cts. per bushel.
“ “ Dubuque to New York.....	32 “ “
Corn “ Illinois River to New York.....	28 “ “

These rates, on an average, are cheaper than shipments from Chicago to New York, via the lakes in the summer time

MALE POPULATION OF EACH COUNTY OF ALABAMA, BETWEEN THE AGES OF TWENTY AND ONE HUNDRED.

COUNTIES.	Whites.	Blacks.	Total.	COUNTIES.	Whites.	Blacks.	Total.
Autauga.....	1,323	1,360	2,683	Limestone.....	1,589	1,475	3,064
Baldwin.....	926	918	1,844	Lowndes.....	1,707	3,842	5,549
Barbour.....	2,857	3,884	6,741	Madison.....	2,767	2,608	5,375
Bibb.....	1,260	584	1,844	Marengo.....	1,586	4,717	6,303
Blount.....	1,370	125	1,495	Marion.....	1,472	176	2,648
Butler.....	3,174	1,459	4,633	Marshall.....	1,594	225	1,819
Calhoun.....	2,922	742	3,664	Macon.....	2,355	4,636	6,991
Chambers.....	2,179	2,255	4,434	Mobile.....	13,292	5,216	18,508
Cherokee.....	2,725	441	3,166	Montgomery.....	3,323	7,348	10,671
Choctaw.....	1,285	1,621	2,906	Monroe.....	1,193	1,319	2,512
Clarke.....	1,443	2,365	3,808	Morgan.....	1,650	625	2,275
Coffee.....	1,373	249	1,622	Perry.....	2,082	3,822	5,904
Conecuh.....	1,111	902	2,013	Pickens.....	1,742	1,835	3,577
Coosa.....	2,366	959	3,325	Pike.....	2,948	1,589	4,537
Covington.....	1,004	265	1,269	Randolph.....	2,560	358	2,918
Dale.....	1,661	341	2,002	Russell.....	1,266	3,635	4,901
Dallas.....	2,520	6,949	9,469	Shelby.....	1,749	656	2,405
DeKalb.....	1,491	113	1,604	St. Clair.....	1,492	316	1,808
Fayette.....	1,972	324	2,296	Sumpter.....	1,472	4,310	5,782
Franklin.....	2,657	1,006	3,663	Tallapoosa.....	2,678	982	3,660
Greene.....	1,801	2,010	3,811	Talladega.....	3,009	2,150	5,159
Henry.....	1,701	933	2,634	Tuscaloosa.....	2,548	1,896	4,444
Jackson.....	2,876	535	3,411	Walker.....	1,170	70	1,240
Jefferson.....	1,731	476	2,207	Washington.....	348	494	842
Lawrence.....	1,728	1,191	2,919	Wilcox.....	1,409	3,958	5,367
Lauderdale.....	2,083	955	3,038	Winston.....	566	7	573

109,312 91,265 200,577

POPULAR VOTE OF ALABAMA AT PRESIDENTIAL ELECTIONS.

In 1836.		In 1852.	
Harrison, Whig.....	16,612	Pierce, Dem.....	26,881
Van Buren, Dem.....	20,506	Scott, Whig.....	15,038
In 1840.		In 1856.	
Harrison, Whig.....	28,471	Buchanan, Dem.....	40,739
Van Buren, Dem.....	33,991	Fillmore, American.....	28,552
In 1844.		In 1860.	
Clay, Whig.....	26,084	Douglas, Dem.....	13,651
Polk, Dem.....	87,740	Breckinridge, Dem.....	48,831
		Bell, Union.....	27,875
In 1848.		In 1868.	
Taylor, Whig.....	30,482	Grant, Republican.....	76,866
Cass, Dem.....	31,363	Seymour, Dem.....	72,066

CONGRESSIONAL ELECTION IN 1868 (FOR THE FORTIETH CONGRESS.)

<i>Dist.</i>	<i>Rep.</i>	<i>Fayette.....</i>	<i>335</i>
I	F. M. Kellogg.	Greene.....	2,174
Baldwin	528	Hale	3,428
Clarke	1,055	Jones	42
Conecuh	392	Marengo.....	3,340
Covington.....	.....	Perry.....	2,741
Dallas	5,289	Pickens.....	1,112
Mobile	5,028	Shelby	574
Monroe	659	Sumter.....	1,463
Washington.....	232	Tuscaloosa	1,501
Wilcox.....	2,914		

Total19,634

Total11,097

No opposition.

II.	C. W. Buckley.
Barbour	1,895
Bullock.....	.....
Butler.....	1,024
Coffee.....	275
Crenshaw.....	.....
Dale .....	.....
Henry .....	.....
Lowndes .....	.....
Montgomery.....	4,751
Pike	490

Total..... 8,440

No opposition.

III.	B. W. Morris.
Chambers.....	802
Clay.....	142
Coosa.....	448
Elmore.....	853
Lee	1,478
Macon	1,657
Randolph.....	528
Russell.....	1,836
Talladega	1,432
Tallapoosa	275

Total 9,451

No opposition.

IV.	C. W. Pierce.
Autauga.....	1,754
Bibb	314
Choctaw.....	860

No opposition.

V.	Callis.	Burke.	Irving.
Baine.....	264	51	
Calhoun	439	10	
Cherokee.....	421	391	
Cleburne.....	305	103	
DeKalb.....	234	232	4
Jackson.....	617	360	14
Madison	2,100	23	.....
Marshall.....	250	237	.....
St. Clair.....	368	177	.....

Total 3,874 2,183 573

J. B. Callis over J. W. Burke, 1,691;
over Irving, 3,301; over both, 1,118.

VI.	Haughey.	McCalley.	Cramer.
Blount.....	165	40	38
Colbert.....	487	96	.....
Franklin.....	40	.....	181
Jefferson.....	411	46	38
Lauderdale.....	275	385	.....
Lawrence .....	.....	776	407
Limestone.....	768	18	.....
Marion.....	88	.....	153
Morgan.....	367	89	42
Walker	45	6	61
Winston	2	36	95

Total 2,648 1,492 1,011

Thomas Haughey over McCalley,
1,156; over Cramer, 1,637; over both,
145. 811 votes were cast for Snelling.

JUDICIAL CIRCUITS OF ALABAMA.

First Circuit—Perry, Dallas, Bibb and Hale.
 Second Circuit—Lowndes, Montgomery, Elmore and Autauga.
 Third Circuit—Jefferson, Tuscaloosa, Marion, Fayette, Winston and Walker.
 Fourth Circuit—Lauderdale, Limestone, Lawrence, Franklin, Colbert and Morgan.
 Fifth Circuit—Madison, Jackson, Marshall, Blount and DeKalb.
 Sixth Circuit—Mobile, Baldwin, Washington and Clarke.
 Seventh Circuit—Choctaw, Pickens, Sumpter, Marengo, Greene and Jones.
 Eighth Circuit—Pike, Coffee, Dale, Henry, Barbour and Bullock.
 Ninth Circuit—Chambers, Tallapoosa, Lee, Russell and Macon.
 Tenth Circuit—Randolph, Clay, Talladega, Shelby and Coosa.
 Eleventh Circuit—Butler, Monroe, Wilcox, Conecuh, Covington and Crenshaw.
 Twelfth Circuit—Cherokee, Baine, St. Clair, Calhoun and Cleburne.

POSTAL REGULATIONS.

Newspapers, to regular subscribers, payable quarterly in advance—weekly 5 cents; semi-weekly 10 cents; tri-weekly 15 cents; six times a week (*Daily Sun*) 30 cents; seven times 35 cents. Subscribers to weekly papers, residing within the county where printed and published, *free*, even if the Postoffice should be without the county. Subscribers residing in Baltimore county are entitled to receive the *Weekly Sun* free of postage, "even if the office to which the paper is sent is without the county, provided it is the office at which they regularly receive their mail matter." Subscribers residing without the county and having their Postoffice within, must pay postage.

The postage on the *Daily Sun* is thirty (30) cents per quarter to all parts of the country.

Transient printed matter, embracing newspapers, pamphlets, hand-bills and posters, book-manuscripts and proof sheets, sheet music, letter envelopes and paper, cards, seeds, cuttings, bulbs, and roots, to be prepaid by stamps, is 2 cents for each 4 oz. or fraction thereof.

Books 4 cents for each 4 oz. or fraction thereof, prepaid by stamps.

Letters are uniform throughout the United States, 3 cents for each half oz. or fraction of half oz., to be prepaid by stamps.

Registered letters are chargeable with a fee of fifteen cents, in addition to the regular postage.

Postoffice orders not exceeding \$20, 10 cents; over \$20 and not exceeding \$30, 15 cents; over \$30 dollars and not exceeding \$40, 20 cents; over \$40 dollars and not exceeding \$50, 25 cents. Large amounts can be transmitted to the same person at the same time by additional orders.

MOBILE AND OHIO RAILROAD.—Hon. A. Murdock, President; C. E. Rushing, Vice-President; L. J. Fleming, Chief Engineer and General Superintendent; J. P. Fresenius, Assistant General Superintendent, Mobile, Alabama; E. S. Hosford, Assistant Superintendent, Macon, Mississippi; J. J. Williams, Assistant Superintendent, Jackson, Tennessee; B. W. Foster, General Freight and Ticket Agent, Mobile, Alabama.

POPULATION OF ALABAMA BY RACE AND SEX IN 1866.

COUNTIES.	WHITES.		NEGROES.	
	Males.	Females.	Males.	Females.
Autauga.....	3,212	3,443	3,127	3,363
Baldwin	1,917	1,647	1,630	1,218
Barbour.....	7,136	7,703	8,821	9,042
Bibb	3,198	3,426	1,479	1,582
Blount	3,886	4,150	371	385
Butler	5,550	6,935	3,544	3,974
Calhoun.....	7,287	8,158	2,021	2,237
Chambers.....	5,390	5,888	5,686	6,113
Cherokee.....	6,983	7,293	1,308	1,386
Choctaw	3,281	3,353	3,217	3,358
Clark.....	3,634	3,968	4,561	4,716
Coffee.....	3,823	4,836	741	796
Cenecuh.....	2,877	3,256	2,082	2,189
Coosa	6,153	7,146	2,404	2,487
Covington.....	2,850	3,140	386	535
Dale	4,740	5,070	957	1,098
Dallas.....	4,794	4,631	14,369	15,232
DeKalb.....	3,815	4,276	368	401
Fayette.....	5,276	5,548	920	1,055
Franklin.....	6,394	6,368	2,646	3,100
Greene.....	3,652	3,793	4,363	4,241
Henry.....	4,823	5,177	2,204	2,287
Jackson.....	7,137	7,603	2,267	1,387
Jefferson	4,498	4,736	1,256	1,345
Lawrence	4,612	4,771	2,955	3,225
Lauderdale.....	4,839	5,149	2,365	3,225
Limestone	3,587	3,789	3,588	3,930
Lowndes.....	3,778	3,963	8,680	9,123
Madison.....	6,329	6,391	5,929	6,756
Marengo.....	3,554	3,520	10,814	11,149
Marion.....	3,868	4,333	541	554
Marshall.....	4,002	4,154	655	630
Macon.....	5,300	5,467	10,762	11,430
Mobile.....	20,438	15,788	8,245	8,419
Montgomery	7,005	6,692	15,016	15,746
Monroe	2,942	3,196	3,260	3,434
Morgan	3,985	4,121	1,555	1,727
Perry.....	4,960	5,061	9,014	9,383
Pickens	4,282	4,739	4,794	5,144
Pike.....	7,772	8,269	4,047	4,270
Randolph	7,082	7,390	1,005	1,058
Russell	6,480	6,051	8,704	8,819
Shelby.....	4,451	4,804	1,619	1,643

[XXXVII]

COUNTIES.	WHITES.		NEGROES.	
	Males.	Females.	Males.	Females.
St. Clair.....	4,059	4,202	1,036	1,014
Sumter.....	2,992	2,924	9,013	8,956
Tallapoosa	7,164	7,642	2,745	3,076
Talladega	7,324	7,999	5,269	5,781
Tuscaloosa.....	6,105	6,557	4,657	5,177
Walker	3,325	3,450	229	257
Washington	966	952	1,110	1,105
Wilcox	3,271	3,281	8,156	8,863
Winston	1,569	1,678	14	17
	257,337	265,462	206,505	216,940

Whites, 522,799; negroes, 423,445. Total population of Alabama in 1860, 946,244.

By comparing this statement with the census of 1860, the decrease of population caused by the war and other causes, will appear as follows:

	WHITES.	NEGROES.	TOTAL.
1860.....	526,431	437,770	964,201
1866.....	522,799	423,445	946,244
Decrease.....	3,632	14,325	17,957

POPULATION OF ALABAMA BY RACE, SEX AND AGE.

Age.	WHITES.		NEGROES.	
	Males.	Females.	Males.	Females.
Under 10.....	82,307	79,817	68,919	69,971
10 to 20.....	65,718	67,785	46,321	46,912
20 to 30.....	37,825	43,416	33,482	41,486
30 to 40.....	26,577	29,325	24,600	27,471
40 to 50.....	18,064	18,405	15,452	15,866
50 to 60.....	13,939	10,733	9,910	8,757
60 to 70.....	7,292	5,281	4,383	3,932
70 to 80.....	2,321	1,950	1,429	1,463
80 to 90.....	508	482	437	509
90 to 100.....	61	69	131	193

POPULATION OF THE CITY OF MONTGOMERY.

(This Census was taken in the winter of 1866, by authority of the City Council.)

	WHITES.			COLORED.			Grand
	Male.	Female.	Total.	Male.	Female.	Total.	
1st Ward.....	624	518	1,142	778	960	1,738	2,880
2nd "	456	456	912	482	796	1,278	2,190
3rd "	304	235	539	183	292	475	1,014
4th "	460	535	995	485	743	1,228	2,223
5th "	625	633	1,258	737	1,081	1,818	3,076
6th "	442	238	680	516	483	999	1,679
Total.....	2,912	2,615	5,526	3,181	4,355	7,535	13,062

[XXXVIII]

VOTE OF ALABAMA BY COUNTIES, IN THE PRESIDENTIAL ELECTION OF 1860 AND 1868.

COUNTIES.	PRESIDENT 1868.		PRESIDENT 1860.		
	<i>Rep.</i> Grant.	<i>Dem.</i> Seymour.	<i>Un.</i> Bell.	<i>Dem.</i> Breck.	<i>Dem.</i> Doug.
Autauga.....	1505	851	256	611	392
Baine.....	283	676	—	—	—
Baldwin.....	558	673	248	129	81
Barbour.....	3168	2210	644	715	6
Bibb.....	492	732	582	613	155
Blount.....	275	461	65	698	488
Bullock.....	2103	1634	—	—	—
Butler.....	724	1823	1079	918	111
Calhoun.....	600	1274	364	2347	54
Chambers.....	1105	1443	918	1017	157
Clarke.....	582	1155	255	952	77
Clay.....	256	619	—	—	—
Cherokee.....	167	913	527	1706	223
Choctaw.....	925	1113	475	442	158
Cleburne.....	403	390	—	—	—
Coffee.....	75	843	394	878	2
Colbert.....	39	1241	—	—	—
Conecuh.....	843	896	338	358	205
Coosa.....	635	957	706	930	844
Covington.....	—	574	416	404	12
Crenshaw.....	90	1214	—	—	—
Dale.....	346	1205	277	1280	5
Dallas.....	7137	1779	620	833	339
De Kalb.....	492	360	204	849	202
Elmore.....	1262	1107	—	—	—
Fayette.....	202	434	359	1299	37
Franklin.....	90	619	715	902	460
Greene.....	2927	869	765	696	157
Hale.....	3297	866	—	—	—
Henry.....	410	1305	317	1109	—
Jackson.....	539	1581	130	1760	565
Jefferson.....	420	538	245	831	77
Jones.....	—	—	—	—	—
Lauderdale.....	378	1436	444	706	790
Lawrence.....	692	1312	525	370	576
Lee.....	1650	1727	—	—	—
Limestone.....	355	1117	368	522	325
Lowndes.....	3339	1171	592	1007	57
Macon.....	2327	1075	1210	1184	46
Madison.....	1535	2156	400	591	1300
Marengo.....	2793	1879	512	838	63
Marion.....	[no election]		197	986	62

COUNTIES.	PRESIDENT 1868.		PRESIDENT 1860.		
	Rep.	Dem.	Un.	Dem.	Dem.
	Grant.	Seymour.	Bell.	Breck.	Doug.
Marshall.....	422	615	165	411	763
Mobile	5200	6658	1629	1541	1823
Monroe.....	58	1196	446	550	222
Montgomery.....	6770	2319	1034	1555	133
Morgan	519	673	144	549	545
Perry	3733	1336	791	892	99
Pickens.....	531	1497	619	1211	16
Pike	256	1813	1227	1581	84
Randolph.....	678	625	567	1734	343
Russell.....	1745	1230	854	993	53
Sanford.....	164	544	—	—	—
Shelby	799	839	570	853	186
St. Clair.....	632	429	174	963	240
Sumter	2516	1469	473	682	136
Talladega	1771	1212	1091	1307	74
Tallapoosa	340	2083	1270	1451	298
Tuscaloosa.....	1167	1383	1023	1219	23
Walker	282	289	103	446	303
Washington	104	17	155	176	24
Wilcox	3396	1484	355	833	113
Winston	284	39	40	203	147
Total.....	76366	72086	27875	48831	13651
Whole vote		148452			90357
Rep. maj.....		4280	B.'s maj.....		20956

COTTON CROP OF SOUTH ALABAMA FOR 28 YEARS.

Years.	Bales.	An. In.	An. De.	Years.	Bales.	An. In.	An. De.
1841.....	317642	—	126083	1855.....	454595	—	83515
1842.....	318315	673	—	1856.....	659738	205143	—
1843.....	432631	164316	—	1857	503177	—	156581
1844.....	468126	—	14505	1858.....	522843	19666	—
1845.....	517550	49424	—	1859.....	704400	181563	—
1846.....	421669	—	95881	1860.....	842729	138323	—
1847.....	322516	—	69153	1861.....	549441	—	293288
1848.....	438324	115808	—	1862.....	—	—	—
1849.....	517846	79522	—	1863.....	—	—	—
1850.....	350297	—	167549	1864.....	—	—	—
1851.....	451697	101400	—	1865.....	75305	—	—
1852.....	549772	98075	—	1866	429102	353797	—
1853.....	546514	—	3258	1867.....	239516	—	189586
1854.....	538110	—	8404	1868.....	366193	126677	—

CROPS PECULIAR TO THE SOUTHERN STATES.

STATES.	Rice—lbs.	Ginned Cotton.	Cane Sugar.	Cane Molasses.
		Bbla., 400 lbs.	Hhds., 1000 lbs.	Gala.
	1860.	1860.	1860.	1860.
Alabama	499559	997878	108	81964
Arkansas	215	357485	—	761
Delaware	—	—	—	—
Florida.....	223209	63322	1761	435890
Georgia.....	52507652	701840	1167	546770
Kentucky.....	24407	4092	—	—
Louisiana.....	6455017	722218	297816	14535157
Maryland.....	—	—	—	45
Mississippi	657293	1195699	244	3445
Missouri	9767	100	—	22305
North Carolina	7593976	145514	38	12494
South Carolina.....	119100528	353413	198	15144
Tennessee.....	30516	227450	—	294322
Texas.....	25670	405100	590	388937
Virginia	8225	12727	—	50
Total.....	187136034	5196838	301922	16337014
Northern States	4139	1239	283	66
Aggregate	187140173	5198077	302205	16337080

EXPORTS OF COTTON TO FOREIGN PORTS FROM MOBILE FOR THE TWO YEARS

	Ending 31st August, 1868.			Ending 31st August, 1867		
	Bales.	Pounds.	Value.	Bales	Pounds.	Value.
To Great Britain—						
In Amer. vessels..	87856	44718704	\$ 7,787,555	55112	27941436	\$ 7,974,435
In Foreign vessels	123298	62758682	10,929,134	90454	45491831	13,078,745
Total Great Brit...	211154	107477386	\$18,716,690	145566	73433267	\$21,053,180
To France—						
In Amer. vessels..	10432	5309888	\$ 924,692	4352	2216721	\$ 665,609
In Foreign vessels	.....	.....	.....	.....	.....	.....
Total to France...	10432	5309888	\$ 924,692	4352	2216721	\$ 665,609
To Spain.....	4875	2481375	\$ 432,120	2075	860702	\$ 321,278
Hamburg, Bremen	7794	3967146	690,860	630	314880	95,664
Holland.....	.....	.....	.....	.....	.....	.....
Genoa and Trieste	2256	1148304	199,971	801	402314	128,018
Cuba .....	.....	.....	.....	.....	.....	.....
Total to other						
Foreign Ports..	14925	7596825	\$ 1,322,952	3506	1577896	\$ 544,960
GRAND TOTAL.....	236511	120384099	\$ 20,964,335	153424	77227884	\$ 22,263,749

COMPARISON OF ALABAMA WITH OTHER STATES IN AREA AND POPULATION.

STATES.	AREA. Sq. Miles.	POPULATION.					Total Pop- ulation.	Increase from '50 to
		Total Pop- ulation.	White Pop- ulation.	Colored Pop- ulation.	Civil- ized Ind'ns.	Total Pop- ulation.		
		1850.	1860.	1860.	1860.	1860.	1860.	1860.
Alabama	50722	771623	526271	437770	160	964201	192578	
Arkansas.....	52198	269897	324143	111259	48	435450	225553	
California.....	188982	92597	358110	4086	17798	379994	287397	
Connecticut	4750	370792	454504	8627	16	460147	89355	
Delaware.....	2120	91532	90589	21627	...	112216	20684	
Florida.....	59248	87445	77747	22677	...	140424	52979	
Georgia.....	58000	906185	591550	465698	38	1057286	151101	
Illinois.....	55410	851470	1704291	7628	32	1711951	860481	
Indiana	33809	988416	1338710	11428	290	1350428	362012	
Iowa	55045	192214	673779	1069	65	674699	482734	
Kansas	81318	.....	106390	627	189	107206	107206	
Kentucky.....	37680	982405	919484	236167	33	1155684	173279	
Louisiana.....	41346	517762	357456	350373	173	709002	190240	
Maine	35000	583169	626947	1327	5	628279	45110	
Maryland	11125	583034	515918	171131	...	687049	104015	
Massachusetts.....	7800	904514	1221432	9692	32	1231066	236552	
Michigan	56451	397654	736142	6799	6172	749113	351459	
Minnesota.....	83531	6077	169395	259	2369	172023	165946	
Mississippi.....	47156	606526	353899	437404	2	791395	184779	
Missouri	65350	632044	1063489	118503	20	1182012	499968	
Nebraska.....	75995	.....	28696	82	63	28841	28841	
Nevada	81539	.....	6812	45	...	6857	6857	
N. Hampshire.....	9280	317976	325579	494	...	326073	8097	
New Jersey.....	8320	489555	546699	25336	...	672035	182480	
New York	47000	3097394	3831590	49005	140	3880735	783341	
North Carolina...	50764	869039	629942	361522	1158	992622	123583	
Ohio	39964	1980320	2302808	36673	30	2339502	359173	
Oregon.....	95274	13294	52160	128	177	52465	39171	
Pennsylvania	46000	2311786	2849259	56949	7	2906115	594329	
Rhode Island	1306	147545	170649	3952	19	174620	27075	
S. Carolina.....	34000	668507	291300	412320	88	703708	35201	
Tennessee	45000	1002717	826722	283019	60	1109801	107084	
Texas.....	274356	212592	420891	182921	403	604215	391623	
Vermont.....	10212	214120	314369	709	20	315098	978	
Virginia	38352	} 1421661	1047299	548907	112	1596318	174657	
West Virginia.....	26000							
Wisconsin.....	53924	305391	773693	1171	1017	775871	470490	

TABLE EXHIBITING THE DATES OF FIRST BLOOM

Of Cotton, Killing Frosts, Total Crops of the United States, and their total value at the average price at Mobile in the following years:

Years.	1st Bloom.	Killing Frost.	Total Crop.	Total Value.
1867-68.....	June 1.....	November 6.....		
1866-67.....	June 11.....	October 25.....	1951988.....	\$282,272,493 56
1865-66.....	June 23.....	October 20.....	2151043.....	\$450,084,227 32
1864-65.....				
1863-64.....				
1862-63.....				
1861-62.....	May 31.....	October 13.....		
1860-61.....	May 25.....	October 30.....	3700000.....	\$185,000,000 00
1859-60.....	May 31.....	November 7.....	4675770.....	\$271,783,807 00
1858-59.....	May 25.....	November 19.....	3851481.....	\$231,196,701 46
1857-58.....	June 17.....	October 8.....	3113962.....	\$178,959,306 14
1856-57.....	June 24.....	October 24.....	2939519.....	\$188,570,143 85
1855-56.....	June 14.....	November 14.....	3527845.....	\$150,109,804 75

MONTHLY RANGE OF PRICES OF COTTON AT MOBILE FOR SIXTEEN YEARS.

Season of	October.	November.	December.	January.	February.
1852-53.....	7 3-4a10 1-2	8 a10 3-4	7 1-2a 9 3-4	7 1-2a11 6	a10 3-4
1853-54.....	7 a10 5-8	7 a10 1-4	7 1-4a10 1-4	7 1-4a10 1-4	6 a10 1-8
1854-55.....	5 1-4a 9 3-4	4 a 9 3-4	4 1-8a 9 3-8	4 a 9 1-8	3 7-8a 9 1-2
1855-56.....	7 a10	5 1-2a10 1-2	5a 9 1-2	5 a 9 1-2	5 1-2a 9 3-4
1856-57.....	9 1-2a13 1-2	7 1-2a12 1-2	7 1-2a12 1-2	10 1-4a13	10 3-4a13 3-4
1857-58.....	9 a15 1-4	10 a12	9 a11 1-4	6 a10 1-2	7 1-2a12 1-2
1858-59.....	9 1-2a12 3-4	10 a12	7 a12 1-4	7 a12 1-4	7 a12
1859-60.....	9 a11 5-8	9 a12 1-4	8 1-2a12 1-4	6 a12 1-4	6 a12 1-2
1860-61.....	9 a12 1-2	6 a12 1-2	6 a12	6 1-4a12 1-4	7 a12 1-4
1861-62.....					
1862-63.....					
1863-64.....					
1864-65.....					
1865-66.....	34 a56	40 a52	33 a50	33 a50	36 a49
1866-67.....	28 a41	25 a38	24 a34	26 a34	25 a32
1867-68.....	12 1-2a19 1-2	12 1-4a17 1-2	11 3-4a16	12 1-2a18 1-4	15 12-a25

Season of	March.	April.	May.	June.	Av. for Season.
1852-53.....	6 a10 3-4	6 1-4a9	6 a10 1-2	8 a10 1-4	6 1-2a 9 1-2
1853-54.....	6 a10 3-4	6 1-2a11 3-4	6 1-2a11 1-2	6 1-2a11 1-4	7 1-4a11 1-4
1854-55.....	4 3-4a 9 1-2	5 1-2a10 3-4	5 1-2a 9 1-2	5 a10 1-4	6 5-8a10
1855-56.....	5 a10 1-2	5 5-8a10	7 a11	8 a11 5-8	5 7-8a10 1-8
1856-57.....	11 1-4a14 3-4	5 1-2a11 3-4	6 1-4a11 3-4	5 1-2a11 1-2	6 a10 3-4
1857-58.....	7 a12 1-2	11 1-4a14 3-4	11 a14 1-2	8 a14 1-2	10 5-8a13 3-4
1858-59.....	7 a13 1-4	7 a12 1-2	5 a12 3-4	6 a12 3-4	8 a13
1859-60.....	6 1-2a12 1-2	3 a12 1-2	3 a13	3 a12 5-8	6 1-2a12
1860-61.....	7 a13 1-2	7 a14	nominal.	nominal.	6 3-8a12 3-4
1861-62.....					
1862-63.....					
1863-64.....					
1864-65.....					
1865-66.....	30 a46	25 a37	25 a39	25 a37	32 1-3a46 2-9
1866-67.....	23 a31	17 a29	19 a26 1-2	20 a26	23 a32 7-25
1867-68.....	19 1-2a27 1-2	26 a33 1-2	24 3-4a32 1-4	23 1-2a29 1-2	17 1-5a24 1-3

NOTE.—The range of prices embraces the lowest and highest prices reported paid or Ordinary and Strict Middling during the above months.

**COMPARATIVE TABLE OF THE PRESIDENTIAL VOTE OF ALABAMA
AND THE OTHER STATES IN 1868.**

STATES.	ELECT. VOTES.	Rep. Grant	Dem. Seymour...	Rep. Majority.	Dem. Majority.	ELECT. VOTE.	
						Grant.....	Seymour...
Alabama.....	8	76366	72086	4280	.....	8	.....
Arkansas.....	5	22152	19078	3074	.....	5	.....
California.....	5	54592	54078	514	.....	5	.....
Connecticut.....	6	50788	47844	2944	.....	6	.....
Delaware.....	3	7614	10957	.....	3343	...	3
Florida.....	3	Chosen by the Legislature				3	.....
Georgia.....	9	57134	102822	.....	45688	...	9
Illinois.....	16	250293	199141	51152	.....	16	.....
Indiana.....	13	176552	166980	9572	.....	13	.....
Iowa.....	8	120399	74040	46359	.....	8	.....
Kansas.....	3	30028	13620	16408	.....	3	.....
Kentucky.....	11	39566	115889	.....	76323	...	11
Louisiana.....	7	34300	79970	.....	45670	...	7
Maine.....	7	70434	42375	28059	.....	7	.....
Maryland.....	7	30442	62356	.....	31914	...	7
Massachusetts	12	136379	59103	77276	.....	12	.....
Michigan.....	8	113229	82364	30865	.....	8	.....
Minnesota.....	4	43413	28030	15383	.....	4	.....
Mississippi....	7	.....	.....	.....	.....	...	.....
Missouri.....	11	85671	59788	25883	.....	11	.....
Nebraska.....	3	9766	5628	4138	.....	3	.....
Nevada (about)	3	10000	8600	1400	.....	3	.....
N. Hampshire	5	37518	30574	6944	.....	5	.....
New Jersey....	7	79882	82789	.....	2907	...	7
New York.....	33	419915	429883	.....	9968	....	33
North Carolina	9	92293	84090	8203	.....	9	.....
Ohio.....	21	280223	238606	41617	.....	21	.....
Oregon.....	3	10961	11125	.....	164	....	3
Pennsylvania.	26	342280	313382	28898	.....	26	.....
Rhode Island	4	12993	6548	6445	.....	4	.....
South Carolina	6	62301	45254	17047	.....	6	.....
Tennessee.....	10	56757	26311	30446	.....	10	.....
Texas.....	6	.....	.....	.....	.....	...	.....
Vermont.....	5	44167	12045	32122	.....	5	.....
Virginia.....	10	.....	.....	.....	.....	....	.....
West Virginia	5	28347	19862	8485	.....	5	.....
Wisconsin.....	8	108857	84710	24147	.....	8	.....
Total.....	317	2995612	2689928	521661	215977	214	80

COMPARATIVE VIEW OF THE EXPORTS OF COTTON

from Mobile for Five Years, commencing 1st September.

Ports.	1867-8	1866-7	1865-6	1860-1	1859-60
Liverpool.....	211154	145141	228016	339845	435908
Fleetwood.....	.....	.....	.....	.....	.....
Glasgow, etc.....	.....	.....	.....	1000	1105
Cork, Cowes, etc.....	.....	425	1155	.....	8650
Total to Great Britain.....	211154	145566	229171	340845	445663
Havre	10432	4352	40184	96429	148918
Marseilles, etc.....	.....	.....	.....	.....	.....
Total to France.....	10432	4352	40184	96429	148918
Amsterdam and Rotterdam....	.....	.....	.....	2069	1481
Antwerp .....	.....	.....	.....	.....	3980
Bremen, St. Petersburg, etc....	7794	630	270	3064	11510
Stockholm, Ghent, etc.....	.....	.....	.....	.....	4835
Barcelona, etc.....	4875	2075	1268	12405	24359
Genoa, Trieste, etc.....	2256	801	.....	141	14313
Other Ports.....	.....	.....	41	.....	4422
Total to other Foreign Ports..	14925	3506	1579	19147	64900
New York.....	16437	23808	83646	7398	11581
Boston	24487	25786	28235	37702	44116
Providence.....	9124	6281	3576	13543	27884
Philadelphia.....	1870	1492	417	5564	6753
Baltimore.....	.....	226	383	649	4838
New Orleans.....	69482	36765	26507	48283	62635
Other Ports.....	834	3800	.....	2897	525
Total to U. S. Ports.....	122234	98158	142764	116036	158332
Grand Total.....	358745	251582	413698	572457	817813
RECAPITULATION.					
Great Britain.....	211154	145566	229171	340845	445653
France	10432	4352	40184	96429	148918
Other Foreign Ports.....	14925	3506	1579	19147	64900
Total Foreign.....	236511	153424	270934	456421	659481
Total United States.....	122234	98158	142764	116036	158332
Grand Total.....	358745	251582	413698	572457	817813

COMPARATIVE CHEAPNESS OF THE ALABAMA WATER LINE

Statement showing the value of a ton of Wheat and one of Corn at given distances from market, as affected by cost of transportation respectively by canal, by railroad, and over the ordinary highway.

	CANAL CAR- RIAGE.		RAILWAY CARRIAGE.		COMMON ROAD CARRIAGE.	
	Wheat.	Corn.	Wheat.	Corn.	Wheat.	Corn.
Value at market.....	49.50	24.75	49.50	24.75	49.50	24.75
" 10 miles from market.....	49.45	24.70	49.35	24.60	48.00	23.25
" 20 " " "	49.40	24.65	49.20	24.45	46.50	21.75
" 30 " " "	49.35	24.60	49.05	24.30	45.00	20.25
" 40 " " "	49.30	24.55	48.90	24.15	43.50	18.75
" 50 " " "	49.25	24.50	48.75	24.00	42.00	17.25
" 60 " " "	49.20	24.45	48.60	23.85	40.50	15.75
" 70 " " "	49.15	24.40	48.45	23.70	39.00	14.25
" 80 " " "	49.10	24.35	48.30	23.55	37.50	14.75
" 90 " " "	48.05	24.30	48.15	23.40	36.00	11.25
" 100 " " "	48.00	24.25	48.00	23.25	34.50	9.75
" 110 " " "	47.95	24.20	47.85	23.10	33.00	8.25
" 120 " " "	47.90	24.15	47.70	22.95	31.50	6.75
" 130 " " "	47.85	24.10	47.55	22.80	30.00	5.25
" 140 " " "	47.80	24.05	47.40	22.65	28.50	3.75
" 150 " " "	47.75	24.00	47.25	22.50	27.00	2.25
" 160 " " "	47.70	23.95	47.10	22.35	25.50	.75
" 170 " " "	47.65	23.90	46.95	22.20	24.00	
" 320 " " "	46.90	23.20	44.70	19.95	1.50	
" 330 " " "	46.85	23.15	44.55	19.80		
" 340 " " "	46.80	23.10	44.40	19.65		
" 350 " " "	46.75	23.05	44.25	19.50		
" 1,000 " " "	44.50	19.75	34.50	9.75		
" 1,650 " " "	41.25	16.50	24.75			
" 1,980 " " "	39.60	14.85	19.80			
" 3,300 " " "	33.00	8.25				
" 4,950 " " "	24.75					
" 5,940 " " "	19.80					
" 9,900 " " "						

TABLE SHOWING WHY THE ALABAMA RIVERS SHOULD BE OPENED.

Power and capacity required to move 240,000 bushels of wheat and 24,000 barrels of flour 1,100 miles by river.

	Cost.
One tow-boat	\$30,000
Eight barges.....	64,000
Men needed—20 at \$2 per day, for say 5 days.....	200
Total.....	\$94,200

[XLVI]

Power and capacity required to move 240,000 bushels of wheat and 24,000 barrels of flour 1,100 miles by railroad.

407 locomotives at \$20,000.....	\$8,140,000
925 freight cars at \$1,200.....	1,110,000
814 engineers and firemen at \$2 per day, 5 days.....	8,640
740 brakemen at \$1 per day for one day	740
Total	\$9,256,380

TABLE SHOWING SUPERIORITY OF THE ALABAMA WATER-LINE.

The following tables show the comparative cost of transportation by the leading routes from the West and Northwest to the Atlantic ports.

The inland distances are taken from Williams' and Appleton's Traveler's Guide Books, and the ocean distances from the Coast Survey office at Washington :

From Dubuque to New York, via Tennessee River and Coosa Canal to Mobile.

Dubuque to Mobile, 1,665 miles @ 3 mills.....	4 99
Mobile to New York, 1,650 " " 1½ "	2 47
3,315	7 46

From Dubuque, Iowa, to New York, by Railroad.

Dubuque to Chicago, by Galena and Chicago Railroad, 188 miles	
Chicago to Dunkirk, by Lake Shore Railroad.....	497 "
Dunkirk to New York, by Erie Railroad.....	460 "
Dubuque to New York.....	1145 " @ 15.0 mills....\$17 17
Difference in favor of the Alabama route, \$9 71 per ton.	

Dubuque to New York, via Toledo and the Lake and Erie Canal.

Dubuque to Toledo, by railroad.....	432 miles @ 15.0 mills	¥ 10 \$6 58
Toledo to Buffalo, by lake.....	252 " " 3 " "	¥ 10 86
Buffalo to New York, as by No. 3.....	501 " "	1 78
1185		\$9 22
Difference in favor of Alabama line, \$1 76 per ton.		

THE ALABAMA MANUAL AND STATISTICAL REGISTER.

To be issued each year, with new matter, and circulated generally throughout the State of Alabama. It gives full and accurate information as to the resources and condition of the State. It presents one of the best advertising mediums offered to the public. Compiled and arranged, annually, by

JOSEPH HODGSON,
Editor of the Daily Mail,
MONTGOMERY, ALABAMA.

HOW IT IS RECEIVED.

Letter from the Sec. of State.

OFFICE SECRETARY OF STATE, }
MONTGOMERY, April 28, 1869.

COLONEL JOSEPH HODGSON—*Sir*: I thank you for a copy of the Alabama Manual and Statistical Register for 1869. The benefit which the State will derive from this publication is so great, that I shall urge upon the Governor the propriety of purchasing a suitable number for judicious distribution. It is certainly the most complete and accurate compendium of information upon the great resources of Alabama ever published.

Very respectfully, your obedient servant, **CHARLES A. MILLER.**

The Alabama Manual and Statistical Register for 1869, an octavo pamphlet of about two hundred pages, compiled by Joseph Hodgson, of the Montgomery Mail, is full of valuable information for emigrants, statisticians and commercial men. The expected railroad connections of our city with Alabama give increased value and interest to the work.—*Cincinnati Gazette.*

As a book of reference it is particularly valuable to parties seeking investments in our Southern country, furnishing, as it does in the most succinct manner, all the statistical and practical information relating to that wonderful State.—*Washington Chronicle.*

We thank Colonel Hodgson for his book, and recommend it to all citizens of Alabama who are desirous of giving to their friends abroad, and in other sections of our own country, an adequate idea of the tempting prospects held out by our richly endowed State to all who are seeking for themselves a new home.—*Alabama State Journal (Rep.)*

The compiler, Colonel Joseph Hodgson, is thoroughly identified with these interests. He has been their champion and exponent, with tongue and pen; and his work is not only what it claims—"a statistical guide for the immigrant, and hand-book for the citizen"—but it is, besides, an invaluable companion to the editor. It gives the stranger a full and clear exhibit of all facts in reference to our soil, climate, position, educational facilities, and mineral wealth.—*Mobile Register (Dem.)*

We were well aware that no one was better suited than our confrere of the *Mail* to compile the work so greatly needed as is the one under consideration, but he has done even better than we expected. The work is comprehensive, admirably arranged, and printed in a style that would do credit to the *Appletons*.—*Mobile Tribune.*

Resolution of the State Immigration Convention, June 1, 1869.

Colonel Crandall offered a resolution that the Convention indorse the ALABAMA MANUAL, prepared by Joseph Hodgson, as a correct compilation of the statistics and statement of the resources of Alabama, upon which immigrants and others may rely.

The resolution was adopted.

There is no fact relative to this great State, naturally one of the wealthiest and most productive in the Union, which can not here be found. It is exceedingly interesting and instructive. There are few people who have not read it who are at all acquainted with the extraordinary mineral and manufacturing resources of Alabama.—*Cincinnati Enquirer.*

It is a book of great value to the Alabamians, and to all others seeking information of that wealth-producing region. Since Tennessee is soon to be married to Alabama by the North and South road, this Register will be valuable to capitalists manufacturers and immigrants. It reflects much credit upon its able and industrious editor.—*Nashville (Tenn.) Banner.*

Colonel Hodgson has evidently been engaged in a labor of love, and his diligent research has resulted in the production of a Manual which will be of the greatest value to all the classes of persons enumerated in the title. Five thousand copies of it judiciously distributed through the Northern States would do more good to the true interests of the State than a thousand stump speakers.—*Camden (Ala.) Visitor.*

It will prove of great value to immigrants and capitalists who design coming to or investing money in the State, as it exhibits in a compact form facts which can not be obtained elsewhere without a vast deal of research and labor.—*Selma Times.*

We know no other book, where so much information concerning the State of Alabama, can be found.—*Huntsville Democrat.*

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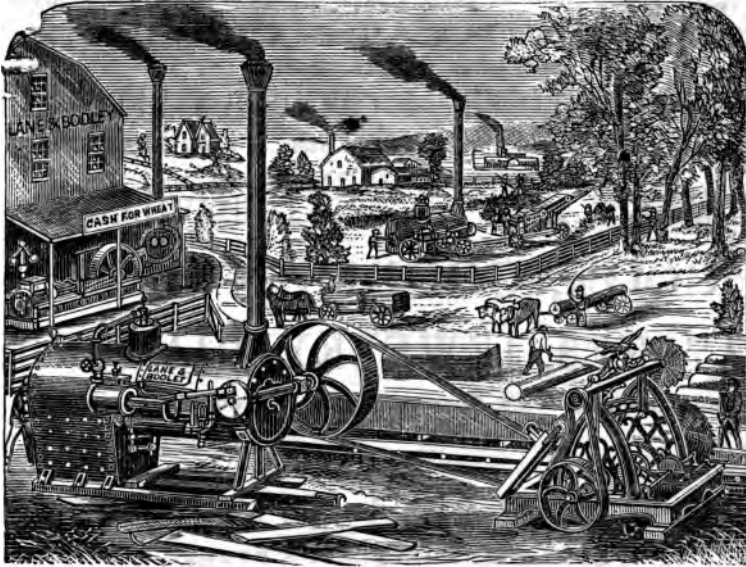
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## INDEX TO APPENDIX.

|                                         | PAGE. |                                              | PAGE. |
|-----------------------------------------|-------|----------------------------------------------|-------|
| <b>EDUCATIONAL—A. Hollingsworth,</b>    |       | <b>PIANOS AND ORGANS—Oscar Gerard,</b>       |       |
| Covington, Ky.....                      | 77    | Cincinnati, O.....                           | 78    |
| Rice & Stewart, St. Louis, Mo.....      | 81    | <b>TOBACCO AND CIGARS—Krohn, Feiss</b>       |       |
| Christian Brotherhood, St. Louis,       |       | & Co., Cincinnati, O.....                    | 78    |
| Mo.....                                 | 75    | L. Harmyer & Co., Cincinnati, O....          | 78    |
| <b>WHITE LEAD, OILS, ETC.—Collier</b>   |       | <b>LIQUOR DEALERS—Derby &amp; Day, St.</b>   |       |
| White Lead Works, St. Louis, Mo. 78     |       | Louis, Mo.....                               | 82    |
| George Partridge & Co., St. Louis,      |       | <b>PLANING MILLS—Lesley, Garnett &amp;</b>   |       |
| Mo.....                                 | 82    | Co., St. Louis, Mo.....                      | 82    |
| <b>ENGINES, MACHINERY, ETC.—A. S.</b>   |       | <b>CHEMISTS—Marsh &amp; Harwood, Cincin-</b> |       |
| Petticrew, St. Louis, Mo.....           | 75    | nati, O.....                                 | 76    |
| G. & W. Todd, St. Louis, Mo.....        | 81    | <b>MANUFACTURERS &amp; MERCHANTS—</b>        |       |
| City Screw & Bolt Works, St. Louis,     |       | Soaps, etc.—George Shillito, Cin-            |       |
| Mo.....                                 | 82    | cincinnati, O.....                           | 76    |
| “Queen of the South,” Cincinnati, O. 83 |       | Trunks—McGuire & Patterson, Cin-             |       |
| J. B. Mooney, Cincinnati, O.....        | 83    | cincinnati, O.....                           | 79    |
| McGowan Bros., Cincinnati, O.....       | 78    | Bakers—Garneau & Doster, St.                 |       |
| C. Kratz, Evansville, Ind.....          | 00    | Louis, Mo.....                               | 75    |
| <b>LOUISVILLE CHEMICAL WORKS—</b>       | 84    | <b>FOUNDERS—Cincinnati Brass Works...</b>    | 76    |
| <b>IRON MANTLES AND GRATES—</b>         |       | Locks—George McGregor, Cincin-               |       |
| Hand, Whitehouse & Co., Cincin-         |       | nati, O.....                                 | 79    |
| nati, O.....                            | 79    | <b>RAILROADS—Ohio &amp; Mississippi.....</b> | 81    |
| Resor Bros., Cincinnati, O.....         | 80    | St. Louis, Iron Mountain & South-            |       |
| <b>WAGONS AND CARRIAGES—H. Nfe-</b>     |       | ern .....                                    | 87    |
| meyer, Cincinnati, O.....               | 83    | Indianapolis, Cincinnati & Lafay-            |       |
| <b>GLASS AND LAMPS—J. Scherrer, St.</b> |       | ette.....                                    | 85    |
| Louis, Mo.....                          | 81    | Great Pan-Handle Route.....                  | 85    |
| H. Burgund, Cincinnati, O .....         | 76    | Cincinnati & Louisville Short Line... 84     |       |
| E. B. Gorton, Cincinnati, O.....        | 79    | Cincinnati, Hamilton & Dayton..... 86        |       |



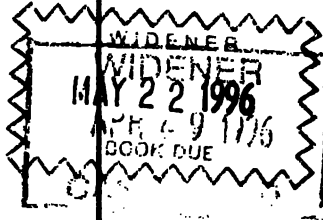
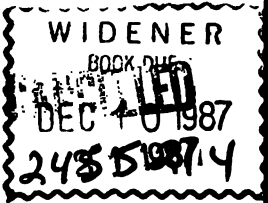






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